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# **TEACHING AND CALIFORNIA'S FUTURE**

## **The Status of the Teaching Profession 2007** ***Full Report***

The Center for the Future of Teaching and Learning  
and

California State University, Office of the Chancellor  
University of California, Office of the President  
WestEd

Research conducted by SRI International

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Stanford University School of Education

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Policy Analysis for California Education

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California State University,  
Office of the Chancellor

Victor Young, President  
The Center for Collaboration and the Future of Schooling



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# ABBREVIATIONS

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API	Academic Performance Index
BTSA	Beginning Teacher Support and Assessment
CAHSEE	California High School Exit Examination
CalSTRS	California State Teachers' Retirement System
CALTIDES	California Longitudinal Teacher Integrated Data Education System
CalTPA	California Teaching Performance Assessment
CBEDS	California Basic Educational Data System
CBEST	California Basic Educational Skills Test
CCTC	California Commission on Teacher Credentialing
CDE	California Department of Education
CDOF	California Department of Finance
CFASST	California Formative Assessment and Support System for Teachers
CFTL	Center for the Future of Teaching and Learning
CSET	California Subject Examinations for Teachers
CSM	Certificated Staff Mentoring
CST	California Standards Test
CSTP	California Standards for the Teaching Profession
CSU	California State University
FACT	Formative Assessment for California Teachers
FAST	Fresno Assessment of Student Teachers
GPA	Grade Point Average
GRE	Graduate Record Examination
NBPTS	National Board for Professional Teaching Standards
NCATE	National Council for Accreditation of Teacher Education
NCLB	No Child Left Behind Act
PACT	Performance Assessment for California Teachers
PAIF	Professional Assignment Information Form
PAR	Peer Assistance and Review
PMAT	Personnel Management Assistance Team
QEIA	Quality Education Investment Act
SAT	Scholastic Aptitude Test
SB	Senate Bill
TCF	Teaching and California's Future
TPA	Teaching Performance Assessment
TPE	Teaching Performance Expectation
UC	University of California



# EXECUTIVE SUMMARY

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For the past decade, as concerns over the quality of California's schools have risen, state policymakers have sought ways to strengthen the state's teacher workforce. In the face of severe teacher shortages, numerous policy efforts have focused on preparing, recruiting, and retaining fully qualified teachers. The results of these policies have been dramatic. The number of underprepared teachers in California dropped from about 42,000 in 2000-01 to about 15,000 in 2006-07. In percentage terms, this represented a reduction from 14% of the workforce to just 5%.

These overall figures, however, mask a number of sobering trends: poor students are still more likely to get an underprepared teacher; at the secondary level, where enrollment is rising, too many teachers are assigned "out-of-field" to classes for which they have minimal or no preparation; and nearly a quarter of new teachers enter the workforce without having earned the state's preliminary credential. These facts, combined with the increasing age of the teacher workforce and a drop in credential production, underscore that policymakers need to continue to focus on ensuring that all students have a fully qualified teacher.

Also troubling is the fact that California students still are not meeting the academic standards the state has set for them. Although test scores have shown gains, more than half of the state's students are not considered "proficient" on the California Standards Test (CST). Worse, the achievement gap between White and Asian students on the one hand and African-American and Latino students on the other has not narrowed at all since the introduction of the CST in 2002-03.

Given these facts, policymakers increasingly are seeking solutions that address both the quantity of fully prepared teachers in the state and the quality of the teacher workforce. Two bills signed by the Governor in 2007 target support for the teacher workforce. SB 112 (Scott) helps districts hire retired teachers, and SB 193 (Scott) makes changes to the paraprofessional teacher training program. Several important pieces of legislation were also passed in 2006.

- **SB 1209 (Scott).** Senator Scott's teacher workforce bill streamlined credentialing, required a Teaching Performance Assessment (TPA) to be included in all preparation programs starting in 2008, created additional mentoring support for novice teachers, offered incentive funding to strengthen intern preparation, and provided an opportunity to improve hiring practices.
- **SB 1133 (Torlakson).** SB 1133 established the Quality Education Investment Act (QEIA). QEIA provides \$2.9 billion to K-12 education over a 7-year period for low-performing schools to reduce class size and improve working conditions for teachers. During the 2006-07 school year, 488 schools across the state were funded.
- **SB 1614 (Simitian).** SB 1614 established the California Longitudinal Teacher Integrated Data Education System (CALTIDES). CALTIDES will integrate data collected by the California Commission on Teacher Credentialing (CCTC), the California Department of Education (CDE), and local educational agencies for the purpose of evaluating programs and automating teacher assignment monitoring requirements under state and federal law.
- **SB 1655 (Scott).** SB 1655 affects the hiring process in low-performing schools by prohibiting voluntary teacher transfers unless the principal of the receiving school agrees.

Together, these new state laws target teaching quality by reducing unnecessary barriers into the profession, improving hiring practices, ensuring that teachers enter the profession well prepared, strengthening support for new teachers, and making data readily available to the public.

## TEACHING AND CALIFORNIA'S FUTURE

Within this context, the Center for the Future of Teaching and Learning presents this year's report of the *Teaching and California's Future* (TCF) initiative, meant to provide California policymakers with objective and timely data on the state's teacher workforce. TCF has five central goals:

- (1) Every student will have a fully prepared and effective teacher.

- (2) Every district will be able to attract and retain fully qualified, effective teachers.
- (3) Every teacher will work in a safe, clean facility conducive to learning; have adequate materials with which to teach; and have the guidance and support of a capable leader.
- (4) Every pathway into teaching will provide high-quality preparation and be based on California's standards for what students should know and be able to do.
- (5) Every teacher will receive high-quality support as he or she begins teaching, as well as continuing professional development, to ensure that he or she stays current in his or her field.

*Teaching and California's Future* has consistently focused the policy spotlight on the status of the teacher workforce. Given the progress made in reducing the number of underprepared teachers throughout the state, the initiative is redoubling its efforts to ensure that all students have a teacher who is both fully qualified and effective.

To help navigate the field of teaching quality, CFTL convened a group of practitioners, policymakers, and researchers. The consensus among this group was that *high-quality teaching occurs when teachers come to the classroom with a certain toolkit of knowledge and skills, which they use in following a set of effective practices that lead, over time, to student learning.* They added to this list the importance of *teachers' working as part of a professional community within a workplace that supports continuous learning on the part of children and adults.*

## THE 2007 REPORT

Given this definition of high-quality teaching as a starting point, we focus this report on how teaching is measured and how those measures are used to strengthen practice at each stage of the teacher development continuum, from teacher preparation to hiring to evaluation of and support for teachers. SRI International, an independent research firm, conducted the research for this report during the 2006-07 school year. We conducted analyses of statewide teacher data to follow trends in teacher supply, demand, and distribution over time and to document changes in California's teacher development policies and programs. We also collected original data in 21 schools located in seven districts representing California's geographic diversity and range of urbanicities. Researchers interviewed district

administrators, school administrators, and veteran and novice teachers to understand hiring priorities and practices, teacher assessment practices, and support provided to teachers. In addition, we visited eight teacher preparation programs and interviewed admissions officers, individuals from credentialing offices, members of the faculty, student teaching supervisors and coordinators, leaders of single- and multiple-subject programs, and the dean of the College of Education. Finally, we administered a survey to a representative sample of principals across the state that focused on principals' practices in hiring, evaluating, and supporting teachers. The findings from these data collection efforts are the basis for this report and are summarized below.

## TEACHER SUPPLY, DEMAND, AND DISTRIBUTION

The composition of California's teacher workforce has changed considerably over the past 6 years, with the number of underprepared and novice teachers shrinking, resulting in fewer schools with high concentrations of underprepared teachers. However, inequities in the distribution of underprepared teachers persist. The greatest drop in underprepared teachers occurred at the elementary level; declines in the numbers of underprepared secondary and special education teachers were more modest. The number of novice underprepared teachers remains high, especially for secondary and special education teachers. Also, out-of-field secondary teachers remain a problem for all content areas. Despite progress made in reducing the number of underprepared teachers, looming retirements and decreases in teacher preparation enrollments may reverse this trend.

### Key findings:

- As of 2006-07, there were about 15,500 underprepared teachers in California, representing just 5% of the teacher workforce. There were about 36,700 novice teachers, representing 12% of the teacher workforce.
- Statewide, 4% of schools had faculties with 20% or more underprepared teachers. Most of these schools were in urban areas, and nearly half were charter schools.
- Low-performing schools had a higher percentage of underprepared teachers than high-performing schools.

- Special education had the greatest percentage of underprepared teachers (11%), compared with only 5% of secondary teachers and 2% of elementary teachers who were underprepared.
- Twenty-six percent of novice secondary teachers were underprepared; 44% of novice special education teachers were underprepared.
- Social science had the highest percentage of out-of-field teachers (21%), followed by physical science (19%), English (14%), life science (11%), and math (11%).
- Nearly one-third of the current teacher workforce was over the age of 50.
- Enrollment in teacher preparation programs decreased by 17% from 2001-02 to 2004-05.

## TEACHER PREPARATION

Teacher preparation represents the first opportunity to define and measure the knowledge and skills desired of future teachers. Although much data is collected on teaching candidates' content knowledge and teaching skills during teacher preparation, the information is not of high quality, and it is rarely used to improve the abilities of teacher candidates. Further, information is not commonly shared between the admissions, coursework, and student teaching phases of preparation.

### Key findings:

- California's teacher preparation programs include multiple opportunities to assess teaching quality: at admission, throughout coursework, during student teaching, and, beginning in 2008, through the Teaching Performance Assessment.
- Teacher candidates' content knowledge typically is reviewed only during the admission process, and information collected is not used to inform a candidate's preparation.
- Teacher educators are particularly concerned about teacher candidates' beliefs and attitudes, but admission processes do not systematically measure these characteristics.
- Typically, methods used to evaluate teacher candidates' coursework do not yield objective measures to differentiate skills among candidates. Assessments embedded in courses offer a promising way to address this shortcoming.

- Student teaching provides the greatest opportunity to assess candidates' teaching quality, but few opportunities exist for training and supporting master teachers and university supervisors, the individuals who best can evaluate candidates' attributes.
- The Teaching Performance Assessment provides an opportunity to align and strengthen data collection and analysis, if thoughtfully crafted. Without careful planning, the TPA may simply add another layer of unused data.

## TEACHER HIRING

Through hiring, districts and schools set priorities for the characteristics they seek in their teaching staffs and establish processes for assessing candidates along those dimensions. Districts and schools have clear hiring priorities about the knowledge and skills they desire for their teaching staffs, but the most prevalent hiring processes provide poor indicators of candidates' teaching quality. Further, hiring is negatively affected by small candidate pools.

### Key findings:

- When hiring teachers, the characteristics most valued by principals are credential status, teaching experience, and a candidate's overall fit with the school or district culture. Teacher characteristics that are associated with student achievement, such as academic background and certification by the National Board for Professional Teaching Standards (NBPTS), are not valued as highly.
- Districts and schools typically use a small number of processes to measure the quality of teacher candidates, and those processes provide limited information on a candidate's pedagogical skills and content knowledge.
- The size and quality of the candidate pool determine the extent to which districts and schools employ multiple processes for assessing candidates or consider data on candidates' teaching quality. Low-performing, high-poverty, high-minority schools do not have sufficient applicant pools and tend not to use multiple measures to assess candidates. Low-performing schools are less able than high-performing schools to find candidates who meet their needs. When hiring is done just before the school year begins, however, the applicant pool is typically smaller for both low- and high-performing schools, limiting

schools' incentives to use information on candidates' teaching quality.

## TEACHER EVALUATION

All classroom teachers are evaluated periodically through a formal performance review process and through additional programs targeted to novice teachers, teachers with unsatisfactory performance reviews, or exemplary teachers. Although they provide an opportunity to measure and support teaching quality, many evaluation processes do not measure teaching quality well nor are they used to inform the types of support offered to teachers to improve teaching quality.

### Key findings:

- Performance reviews, which rely heavily on observations of teachers, do not measure teaching quality well, nor are they used to determine teachers' professional development needs or to set professional goals.
- Statewide programs to measure the teaching quality of novice teachers, teachers with unsatisfactory performance reviews, and accomplished teachers either fail to link measurement and support or are used infrequently. The two programs in place to measure the teaching quality of novice teachers, the Beginning Teacher Support and Assessment program and teacher performance reviews, work independently of each other rather than informing one another to best support new teachers. The state's program to support and evaluate teachers with unsatisfactory performance reviews (Peer Assistance and Review) is largely underutilized. National Board Certification is a highly regarded process for evaluating the teaching quality of accomplished, experienced teachers but is undertaken by few teachers.
- Local processes in which whole faculties or groups of teachers assess teaching practices together for the purposes of whole-school reform are valued highly and feed directly into improving practice.

## CONCLUSIONS

Looking across the teacher development continuum, weaknesses become apparent in how teaching quality is measured and how that information is used to support teachers. Although much information is collected on teachers' knowledge and skills, the data are not of high quality—that is, they do not measure teachers' knowledge and skills well. Those measures that are available are not used to strengthen teaching quality—assessments that identify teachers' strengths and weaknesses do not inform the types of support offered to teachers. Further, there are few links between different points on the continuum, so information on teaching quality is compartmentalized.

California needs to create a teacher development system designed to strengthen teaching quality. The system should link the components of the teacher development continuum, be based on a common definition of teaching quality, promote reliable measures of teachers' knowledge and skills, and support the development of high-quality teaching. A system of teacher development can continuously improve teaching quality and ultimately result in improved student outcomes.

## RECOMMENDATIONS

On the basis of the findings in this report, deliberations with the cosponsors and Task Force members who guide this work, and years of experience working with state agencies and California policymakers, CFTL recommends the following to strengthen California's teaching force:

- (1) Review and align the current components of teacher development to form a *system* that is focused on strengthening teaching quality.
- (2) Continue to develop the California Longitudinal Teacher Integrated Data Education System (CALTIDES) and use the data derived from the system to inform decisions about the ways in which the components of teacher development can be revised, aligned, and made into a system that learns, adapts, and evolves.
- (3) Regularly assess classroom practice and use the information gathered to strengthen teaching quality.
- (4) Encourage policies that will build and support a larger pool of prospective teachers.

# CHAPTER 1

---

# INTRODUCTION

For the past decade, as concerns over the quality of California's schools have risen, state policymakers have sought ways to strengthen the state's teacher workforce. In the face of severe teacher shortages, numerous policy efforts have focused on preparing, recruiting, and retaining fully qualified teachers. More recently, policymakers have broadened their focus to pay greater attention to teaching quality. What needs to be done to ensure that all students have a teacher who is both fully *qualified* and *effective*?

This document, the Center for the Future of Teaching and Learning's (CFTL) ninth annual report on the status of the teaching profession in California, provides an overview of teacher supply and demand in the state and then focuses on how policymakers and practitioners measure teaching quality at each stage of the profession and how that information is used to improve teaching.<sup>1</sup> From teacher preparation program admission requirements to assessments of student teaching to hiring criteria and teacher evaluation rubrics, we identify what is valued about teachers and their teaching and how those characteristics are measured. The goal of this report is to make those definitions explicit and assess the utility of the resulting information. The report undertakes to answer the question "To what extent do current policies and practices result in a stronger and more effective teacher workforce?"

In this introductory section, we begin by providing background on how policymakers have addressed concerns about teacher qualifications and teacher quality and describe how CFTL's *Teaching and California's Future* initiative fits into these efforts. We then describe the initiative, define "teaching quality," and outline the study methodology and the organization of the report.

## BACKGROUND: TEACHER QUALIFICATIONS AND TEACHING QUALITY

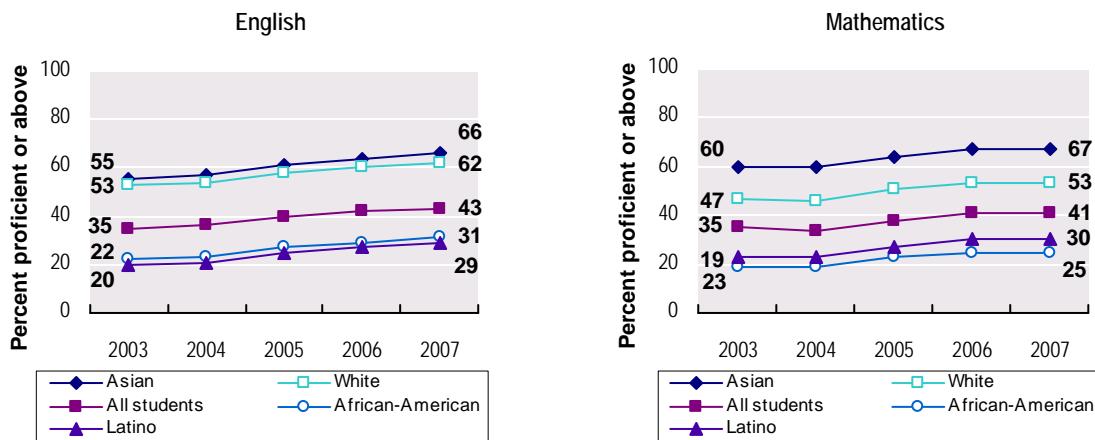
In the late 1990s, in the wake of class size reduction, California faced a crisis with 14% of the teacher workforce—and one of every two new hires—not having completed their preparation before taking charge of a classroom. Worse, these underprepared teachers were concentrated in the poorest and lowest-performing schools: the students who needed the best teachers were most likely to get the least prepared ones.

The policy response was multifaceted. The California State University and the University of California, as well as private institutions, expanded their teacher preparation programs; by 2002, California was producing 50% more teacher candidates than it had in 1998. The state's intern program, which provided structured preparation and support to underprepared teachers, expanded sixfold during the same period. Concurrently, the federal No Child Left Behind Act of 2001 (NCLB) mandated that all teachers be "highly qualified," meaning that they have an appropriate credential or are enrolled in an alternative certification program. The law pressured district and school administrators to seek out qualified candidates and prompted prospective teachers to take the steps necessary to fulfill the requirements of a preliminary credential, or at least to enroll in an intern program.

The results of these policies have been dramatic. As we outline in the next chapter of this report, the number of underprepared teachers dropped from about 42,000 in 2000-01 to about 15,000 in 2006-07. In percentage terms, this represented a reduction from 14% of the workforce to just 5%. These overall figures, mask a number of troubling trends: poor students are still more likely to get an underprepared teacher; at the secondary level, where enrollment is rising, too many teachers are assigned "out-of-field" to classes for which they have minimal or no preparation. In addition, in

<sup>1</sup> Copies of previous years' reports can be found at The Center for the Future of Teaching and Learning's Web site: [www.cftl.org](http://www.cftl.org).

**Exhibit 1**  
**CST Results by Ethnicity, 2003-2007**



*See Appendix D for source and technical information.*

*“... California students are still not meeting the academic standards the state has set for them.”*

2006-07, nearly a quarter of new teachers entered the workforce without having earned the state’s preliminary credential. These facts, combined with the increasing age of the teacher workforce and a drop in credential production, underscore that policymakers will need to continue to focus on ensuring that all students have a fully qualified teacher.

Also troubling is the fact that California students are still not meeting the academic standards the state has set for them. Although test scores have shown gains, more than half of the state’s students are not considered “proficient” on the California Standards Test (CST). Worse, the achievement gap between White and Asian students on the one hand and African-American and Latino students on the other has not narrowed at all since the introduction of the CST in 2002-03 (Exhibit 1). For example, in English, whereas approximately two-thirds of White and Asian students are proficient, less than one-third of African-American and Hispanic students score at this level—this gap of about one-third has remained unchanged over the past 4 years.

### THE POLICY RESPONSE

Given these facts, policymakers increasingly are seeking solutions that address both the quantity of fully prepared teachers in the state and the quality of the teacher workforce. Several important pieces of legislation were passed in 2006.

**SB 1209 (Scott).** Senator Scott’s teacher workforce bill streamlined credentialing, required a Teaching Performance Assessment (TPA) to be included in all

preparation programs starting in 2008, created additional mentoring support for novice teachers, offered incentive funding to strengthen intern preparation, and provided an opportunity to improve hiring practices.

Streamlining the credentialing process is a predominant feature of the legislation. The bill allows substitution of a passing score on the GRE, SAT Reasoning test, or The ACT Plus Writing test in lieu of passing CBEST. Currently, these options are not available because the CCTC is awaiting a definition of passing scores from the Superintendent of Public Instruction (CCTC, 2007). Across the preparation programs we visited for this study, admissions officers were aware of the changes and were planning to modify their admissions practices to align with credentialing standards once passing scores are established.

In addition to credentialing requirements, SB 1209 also requires preparation programs to begin assessing the performance of teacher candidates through the TPA beginning in 2008. TPAs were first established in 1998 under SB 2042, but full implementation was delayed because of a lack of funding. Teacher preparation programs participating in our study highlighted the move to fully implement TPAs, noting that they are participating in either the state-designed TPA (CalTPA) or a university-created TPA.

SB 1209 included two significant policies to support interns. First, the legislation increased the per teacher award from \$2,500 to \$3,500 for alternative certification programs that agree to distribute interns

evenly in their district and maintain small mentor-intern ratios (5:1). Additionally, the legislation established the Certificated Staff Mentoring (CSM) Program which awards veteran teachers \$6,000 for teaching in low-performing schools and mentoring novice teachers during their internship or induction. In the 2007-08 budget, funding for the CSM Program has been maintained and was slightly increased to include a cost-of-living adjustment. Although the schools we visited either were unaware of the program or were not participating, several districts have taken advantage of the new program. In 2006-07, grants were awarded to 173 districts and offices of education in 42 counties across the state (California Department of Education [CDE], 2007a).

Finally, SB 1209 affected hiring procedures in districts by authorizing school districts and teachers' unions to apply for planning grants to develop alternative salary schedules. It also established Personnel Management Assistance Teams (PMATs) throughout the state to act as resources for districts in the hiring process. PMATs are still in the early planning stages. No new funding was awarded in 2007-08, since funds still remain from the initial \$3-million allocation in the previous budget (CDE, 2007b). Because of the early stage of this initiative, case study districts and schools we visited were unaware of PMATs and were unsure of what hiring supports might be expected.

**SB 1133 (Torlakson).** SB 1133 established the Quality Education Investment Act (QEIA) of 2006. QEIA provides \$2.9 billion to K-12 education over a 7-year period starting in 2007-08. It provides funding for low-performing schools (ranked in deciles 1 and 2 on the 2005 API) to reduce class size and improve working conditions for teachers. During the 2006-07 school year, districts were asked to nominate eligible schools. The California Department of Education (CDE) then used a lottery process, weighted to account for geography and grade level, to determine participation. The lottery resulted in funding of 488 schools across the state. QEIA has many aspects that will require a great deal of effort and monitoring. For example, the level of teacher experience (up to 10 years) must be balanced throughout the district, teachers must participate in an average of 40 hours of professional development per teacher per year, most schools will have to reduce class sizes, and schools must exceed their API growth targets averaged over the first 3 years of funding. To assist with these issues, up to \$2 million will be allocated to county offices of education for monitoring, and \$5 million will be

allocated to two QEIA centers (housed at the Los Angeles County Office of Education and the Sacramento County Office of Education) to provide technical assistance to schools and districts (CDE, 2007c). One case study district reported that it chose not to participate in QEIA because it is a reimbursement program. This district did not have any funds it could shift to QEIA implementation, even with the promise of reimbursement, without cutting other programs or services.

**SB 1614 (Simitian).** Teacher workforce data are currently collected and maintained by numerous agencies. A study was conducted in 2005 to determine the feasibility of integrating teacher workforce information from these various agencies. SB 1614 was written as a result of this feasibility study and established the California Longitudinal Teacher Integrated Data Education System (CALTIDES). CALTIDES will integrate data collected by the CCTC, the CDE, and local educational agencies for the purpose of evaluating programs and automating teacher assignment monitoring requirements under state and federal law. CALTIDES will also enable more sophisticated analyses of teacher workforce issues, including attrition and school and district teacher turnover rates. The system will not be used for purposes related to pay, promotion, sanction, or personnel actions. A CALTIDES working group has been established to advise the CCTC and the CDE as they develop the CALTIDES Request for Proposals. CALTIDES is expected to be operational in 2010-11.

**SB 1655 (Scott).** SB 1655 affects the hiring process in low-performing schools by prohibiting voluntary teacher transfers unless the principal agrees<sup>2</sup>. In essence, it allows principals in schools with an API decile of 1 to 3 to refuse a teacher requesting to transfer into their school. Further, any transfer requests made after April 15 shall not be given priority over regular applicants in the hiring process. Case studies show that communication regarding this policy has been unclear for some principals of low-performing schools. In one district we visited, nearly all principals in the district are eligible to use this new tool. However, principals of eligible schools do not believe that they have the right to refuse transfers.

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<sup>2</sup> In districts where the collective bargaining agreement is in direct conflict with this legislation, the prohibitions of this new Education Code section will become operative when the current collective bargaining agreement expires.

*“Good teaching is defined by (a) what the teacher brings into the classroom, or teacher characteristics; (b) what teachers do while they are in the classroom, or teaching practices, and (c) what students take out of the classroom, or student learning gains.”*

Although the district has provided information to principals, there seems to be a shortage of communication and clarity surrounding the policy, with the result that principals know the law exists but believe they will not be able to use its provisions.

In 2007, two education bills were signed by the Governor. SB 112 (Scott) helps districts hire retired teachers, and SB 193 (Scott) makes changes to the paraprofessional teacher training program.

**SB 112 (Scott).** This legislation is designed to make it easier for districts to hire retirees or people who have taken time out of their teaching career. The bill allows returning teachers to meet basic skills requirements through passing scores on the Graduate Record Examination (GRE), Scholastic Aptitude Test (SAT), or The ACT. Returning teachers may also submit previous passing scores on the CBEST to meet basic skills requirements. Further, SB 112 clarifies that teachers who hold a credential and return to service should not be considered “new” teachers, thereby exempting them from participating in the state’s teacher induction program. SB 112 is intended to make it easier for districts to hire retired teachers to return to the classroom and serve as mentors to new teachers.

**SB 193 (Scott).** The legislature provides funding to the California Commission of Teacher Credentialing (CCTC) to make grants to school districts for the California School Paraprofessional Teacher Training Program. SB 193 increases the limits on grants per paraprofessional from \$3,000 to \$3,500. It also requires paraprofessionals to obtain CCTC clearance before participating in the program, makes changes to repayment guidelines for participants who fail to fulfill obligations, and changes program evaluation requirements from annual to once every 5 years.

Together, these new state laws target teaching quality by reducing unnecessary barriers to entry into the profession, improving hiring practices, ensuring that teachers enter the profession well prepared, strengthening support for new teachers, and making data readily available to the public.

## TEACHING AND CALIFORNIA’S FUTURE

Within this context, the Center for the Future of Teaching and Learning presents this year’s report of the *Teaching and California’s Future* (TCF) initiative, meant to provide California policymakers with

objective and timely data on the state’s teacher workforce. TCF has five central goals:

- (1) Every student will have a fully prepared and effective teacher.
- (2) Every district will be able to attract and retain fully qualified, effective teachers.
- (3) Every teacher will work in a safe, clean facility conducive to learning; have adequate materials with which to teach; and have the guidance and support of a capable leader.
- (4) Every pathway into teaching will provide high-quality preparation and be based on California’s standards for what students should know and be able to do.
- (5) Every teacher will receive high-quality support as he or she begins teaching, as well as continuing professional development, to ensure that he or she stays current in his or her field.

*Teaching and California’s Future* has consistently focused the policy spotlight on the status of the teacher workforce. Given the progress made in reducing the number of underprepared teachers throughout the state, the Center is redoubling its efforts to ensure that all students have a teacher who is both fully qualified and effective. Thus, this year’s report adds a focus on teaching quality.

## DEFINING TEACHING QUALITY

We know that good teaching is important. Research has shown that the quality of instruction a student receives makes a real difference in how much he or she learns. In fact, the quality of a student’s teacher is more important than any other determinant of learning except family background (see, for example, Hanushek, 1992; Rivkin, Hanushek, & Kain, 2005; Rockoff, 2004; Sanders & Rivers, 1996). What is less clear is exactly *what* constitutes high-quality teaching.

In practice, there are three related schools of thought. Good teaching is defined by (a) what the teacher brings into the classroom—that is, *teacher characteristics*, (b) what teachers do while they are in the classroom—*teaching practices*, and (c) what students take out of the classroom—*student learning gains*.

The adherents of focusing on teacher characteristics note that, in most professions, standards (e.g., passing a professional exam, obtaining a medical degree) are set to ensure a degree of quality. In education, the teacher credential has played this role, along with

teachers' content knowledge, their intellectual aptitude, and their experience. The logic here is that it is difficult to measure teaching quality directly, so indirect measures should be used. In fact, current teacher salary schedules use these proxies for rewarding teachers financially.

Others argue for a more direct measure of what teachers actually do. Those who focus on teaching practices argue that research across many fields has converged over the past few decades on a core set of practices that are most effective over time and in many different settings. Several authors have developed pedagogical principles for educators that are based on thorough analyses of the available research (Danielson, 2007; Estrada, 2005; Tharp, Estrada, Dalton, & Yamauchi, 2000; National Research Council, 1999a; Resnick, 1999; Tharp & Gallimore, 1988). The following are five common principles:

- **Building on students' prior knowledge.** The research literature makes a case that teachers need a strong understanding of students' content knowledge and skills in order to plan and deliver instruction effectively (National Research Council, 1999a, 1999b).
- **Linking goals, assessment, and instruction.** Research finds that good teachers base their instruction on specific and ambitious learning goals, frequently use assessments to monitor students' progress toward those goals, and continually adjust their instruction based on what they learn from the assessments (Danielson, 2007; Resnick, 1999).
- **Teaching content and critical thinking.** Content knowledge and critical-thinking skills are central to academic success, and the research literature as a whole suggests that effective teachers focus on both (National Research Council, 1999b; Palincsar & Brown, 1982; Resnick, 1999).
- **Developing language skills.** Competency in oral and written language is central to students' academic success. Therefore, a key aspect of any teacher's job is to develop students' language skills, regardless of students' ages or the specific subject matter being taught (Tharp et al., 2000).

- **Creating a culture of learning.** Effective teachers create a classroom culture that promotes learning. Of critical importance is the community that is established among students (Brown & Campione, 1994; Danielson, 2007; National Research Council (1999b).

Adherents of this perspective argue for its utility because these practices are what teachers who want to improve need to adopt.

Finally, there are those who eschew measuring "inputs" (teacher characteristics) or "processes" (teaching practices) and argue that only outcomes matter. From this perspective, the definition of good teaching is simple: it results in higher student performance (Podgursky & Springer, 2006). This argument underlies the increasing calls for merit- or performance-based pay (see Finn, 2005).

Each of these perspectives has its strengths, both intuitive and empirical—that is, it makes sense and is backed by supportive (if not always consistent) research. Each, however, also has its weaknesses. The link between characteristics and learning is more inconsistent than its adherents admit. Defining what effective practices look like in real classrooms with specific populations of students is more difficult than outlining general principles. Linking student learning gains solely to teachers, as if no other factors were at play, is for many a too simplistic logic.

To help us navigate this minefield, CFTL convened a group of practitioners, policymakers, and researchers. The consensus among this group was that any definition of high-quality teaching has to include all of these perspectives. They argued that *high-quality teaching occurs when teachers come to the classroom with a certain toolkit of knowledge and skills, which they use in following a set of effective practices that lead, over time, to student learning.* They added to this list the importance of teachers' working as part of a professional community within a workplace that supports continuous learning on the part of children and adults.

*“...high-quality teaching occurs when teachers come to the classroom with a certain toolkit of knowledge and skills, which they use in following a set of effective practices that lead, over time, to student learning.”*

## **METHODOLOGY AND ORGANIZATION OF THE REPORT**

Given this definition of high-quality teaching as a starting point, we focus this report on how good teaching is measured and how those measures are used to strengthen practice at each stage of the teacher development continuum.

Research for the report was conducted by a team at SRI International, an independent research and consulting organization. Findings are drawn from three main sources: case studies of schools and districts, case studies of teacher preparation programs, and a statewide survey of school principals. The research team visited seven districts in the state representing California's geographic diversity, including three districts in southern California, two districts in the Central Valley, one district in the Bay Area, and one district in north central California. Districts also were selected to represent a range of urbanicity from districts in densely populated, urban areas to districts in smaller towns. Researchers interviewed district administrators and school personnel in 21 schools, including school administrators, veteran teachers, and novice teachers, to gain an understanding of hiring priorities and practices and support provided to teachers.

Once the districts were selected, a nested sample of teacher preparation programs was selected. The study team visited each of the three major teacher preparation systems within California, including five California State University (CSU) campuses, one University of California (UC) campus, and two private institutions. Researchers focused primarily on single-

and multiple-subject credential programs but also reviewed intern and blended programs where they existed. Because data collection among California teacher preparation programs included a focus on the recently mandated Teaching Performance Assessment, researchers visited programs in different phases of implementing this state mandate. At each selected program, we interviewed admissions officers, individuals from credentialing offices, members of the faculty, student teaching supervisors and coordinators, leaders of single- and multiple-subject programs, and the dean of the College of Education.

We also administered a survey to a representative sample of principals across the state. The survey focused on principals' practices in hiring, evaluating, and supporting teachers. All data for the report were collected during the 2006-07 school year (see Appendix A for a detailed description of the methodology).

In the next chapter, we look at what we know about the characteristics of the teacher workforce in California. The following chapters then look at measures of teaching quality in teacher preparation, hiring, and teacher evaluation.

We find, as noted earlier, that the number of underprepared teachers in the state continues to decline, although inequities persist and looming retirements raise questions about the future. We also document how, overall, California lacks a teacher development system that rigorously measures teaching quality or uses what information it does collect to improve teaching quality.

## CHAPTER 2

# TEACHER SUPPLY, DEMAND, AND DISTRIBUTION

As a first step toward ensuring that students have a fully prepared and effective teacher, California policymakers require that prospective teachers graduate from an accredited teacher preparation program and receive a preliminary credential—or proceed through an alternative certification route. Once teachers are in the classroom, state policymakers acknowledge their continued need for support and require participation in an induction program.

As a context for this report's focus on teaching quality, we review here what we know about the teacher labor force. We focus on the number of teachers who are not yet fully prepared when entering the workforce and the number of novice teachers. We also pay attention to the distribution of these teachers, asking whether they are concentrated in certain types of schools. In previous reports, we found that teachers who had yet to complete their preparation, called "underprepared teachers" were concentrated in the neediest schools, those with low academic

achievement and the highest concentrations of poor and minority students. Over the past 8 years, the state has made steady progress in reducing the overall number of underprepared teachers and reducing the concentration of underprepared and novice teachers in the state's neediest schools.

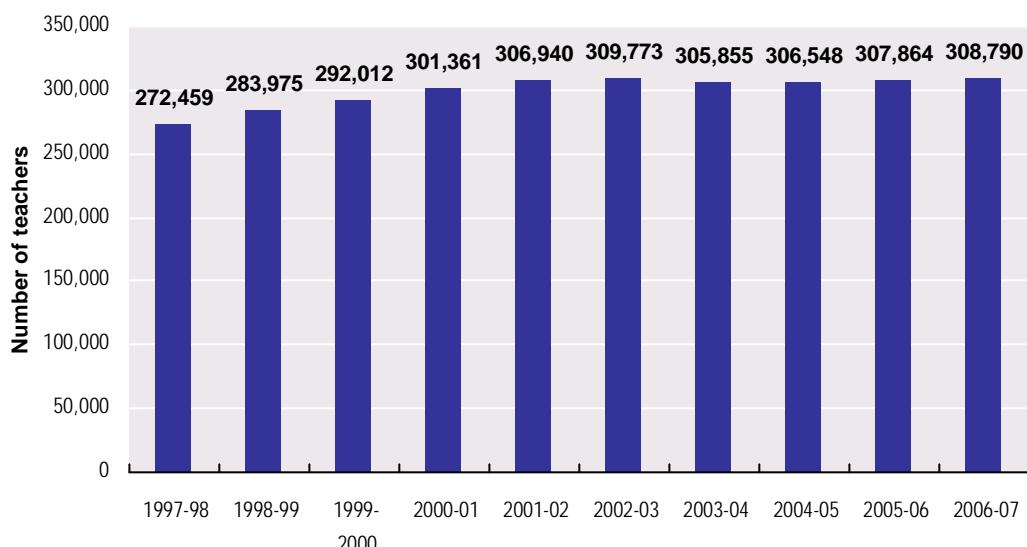
In this chapter, we provide a brief overview of the state's efforts to reduce the number of underprepared teachers and focus on the trends in the distribution of underprepared and novice teachers by school-level achievement.

### SIZE OF THE WORKFORCE

The teacher workforce's phenomenal growth throughout the 1990s and the beginning of this decade has slowed considerably. From 1997-98 to 2002-03, the teacher workforce grew by more than 37,000 teachers, or 14%, to reach nearly 310,000.

*"Over the past 8 years, the state has made steady progress in reducing the overall number of underprepared teachers and reducing the concentration of underprepared and novice teachers in the state's neediest schools."*

**Exhibit 2**  
**Number of K-12 Teachers in the California Workforce, 1997-98 to 2006-07**



*See Appendix D for source and technical information.*

Since that time, there has been virtually no growth. In fact, the workforce in 2006-07 was slightly smaller than it was in 2002-03 (see Exhibit 2).

## **COMPOSITION OF THE TEACHER WORKFORCE**

The quality of teaching in a classroom is influenced by the preparation a teacher receives and his or her experience. A recent large-scale, longitudinal study showed that students in the classrooms of fully prepared teachers outperformed students in classrooms where teachers had not yet finished their preparation (Clotfelter, Ladd, & Vigdor, 2007). The same study showed that students performed better in classrooms with more experienced teachers. Here we look at the prevalence of (1) underprepared teachers—teachers, including interns and holders of emergency-type permits, who have not completed a teacher preparation program, and (2) novice teachers—teachers in their first or second year of teaching.

### **UNDERPREPARED TEACHERS**

Immediately after the implementation of class size reduction in 1996-97, the number of underprepared teachers grew rapidly. Over the next 4 years, the underprepared teacher population grew from approximately 34,500 in 1997-98 to over 42,400 in 2000-01. Since 2000-01, California has experienced a steep decline in the number and overall percentage of underprepared teachers in the workforce, dropping by 63% to about 15,500. Underprepared teachers in 2006-07 represented just 5% of the teacher workforce, down from 14% in 2000-01 (see Exhibit 3). After almost a decade since the implementation of class size

reduction and major policy initiatives to address the shortage of fully credentialed teachers, the state now reports the lowest percentage of underprepared teachers in the workforce since the state began reporting this number in 1997-98.

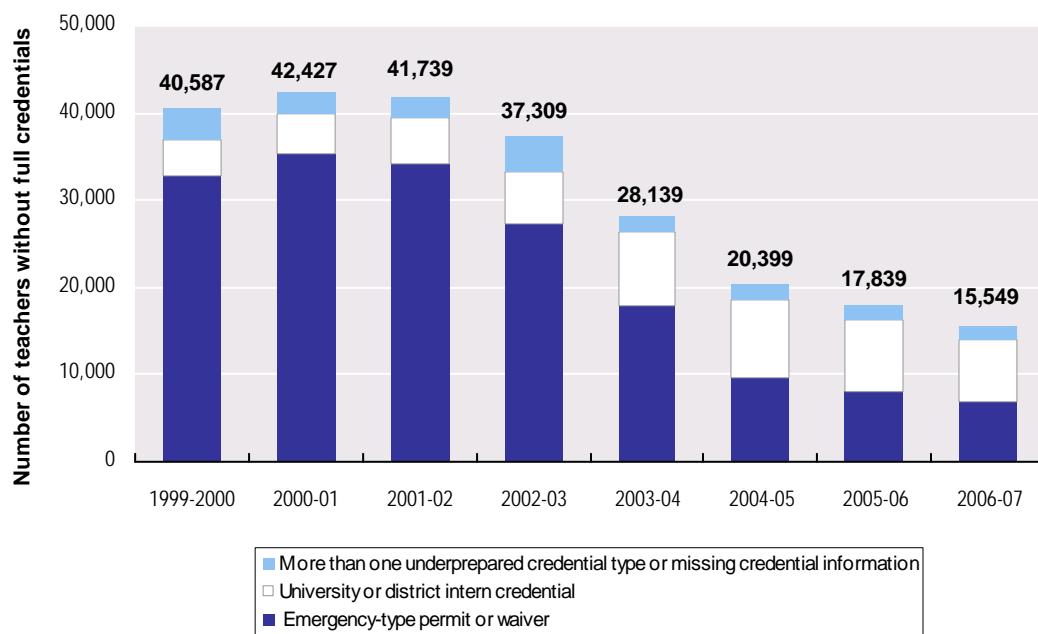
Along with the overall decline in underprepared teachers, a shift has occurred in the types of credentials and permits held by underprepared teachers. A greater percentage of underprepared teachers now hold intern credentials and therefore are compliant with NCLB.<sup>3</sup> In 1999-2000, just over 80% of underprepared teachers (32,800 teachers) held emergency-type permits, compared with 44% (6,880 teachers) in 2006-07.

### **Novice Teachers**

Novice teachers (those in their first or second year of teaching) tend to be less effective than their veteran peers (Hanushek, Kain, O'Brien, & Rivkin, 2005). In 2006-07, novice teachers accounted for 12% (or 36,722) of the total teacher workforce, down slightly from 15% (or 45,979) at the beginning of the decade. There has been a slight increase in the number of novice teachers each year since 2003-04, which mirrors the increase in the overall teacher workforce over this same period. In addition to changes in the number and percentage of novice teachers over the past decade, the credential status of the novice teacher pool has improved. In 2000-01, of the approximately 46,000 novice teachers almost half (47%) were underprepared. By 2006-07, the novice teacher population declined to approximately 36,700 and 23% were underprepared (see Exhibit 4).

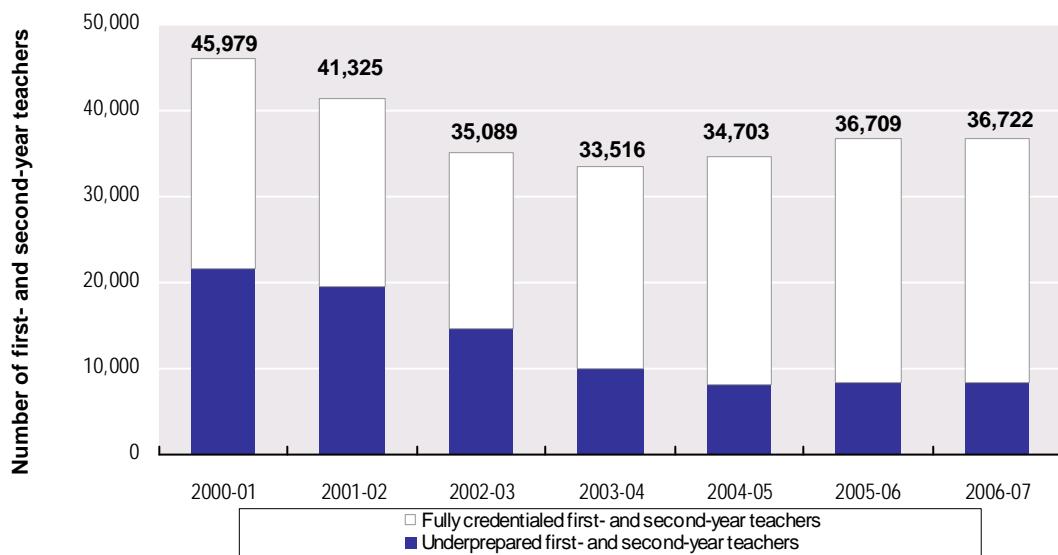
<sup>3</sup> A lawsuit filed in August 2007 by Public Advocates against the U.S. Department of Education is challenging the legitimacy of including intern teachers in NCLB's definition of "highly qualified." See <http://www.publicadvocates.org/> for more information.

**Exhibit 3**  
**Number of Underprepared Teachers, by Credential Type, 1999-2000 to 2006-07**



*See Appendix D for source and technical information.*

**Exhibit 4**  
**Number of Novice Teachers, by Credential Status, 2000-01 to 2006-07**



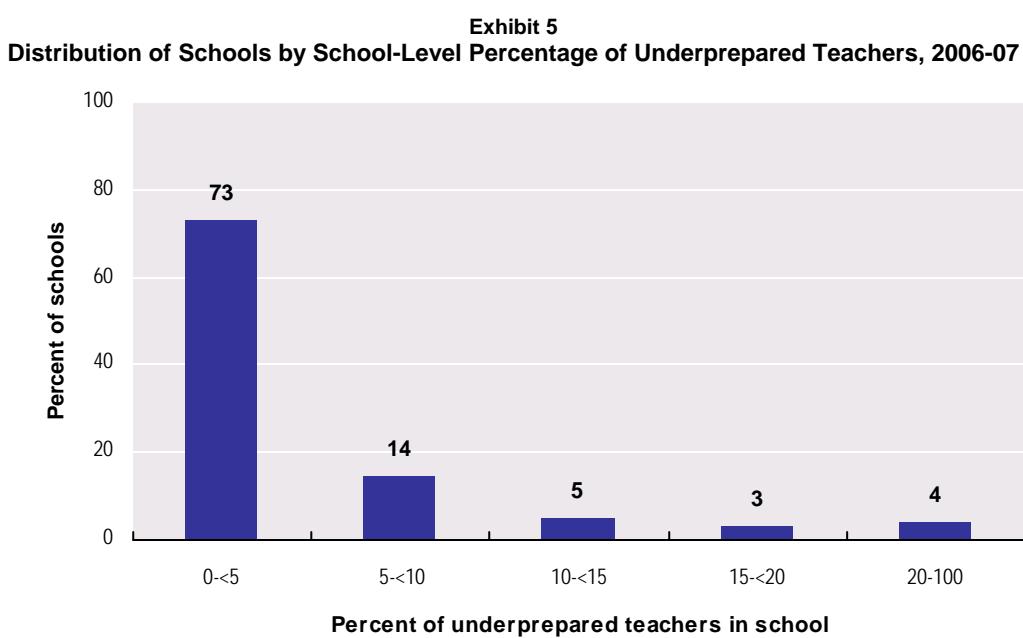
*See Appendix D for source and technical information.*

## DISTRIBUTION OF UNDERPREPARED AND NOVICE TEACHERS

*“As the population of underprepared teachers has decreased, so has the number of schools with high concentrations of underprepared teachers... Yet, a subset of the state’s schools continues to face significant staffing challenges.”*

As the population of underprepared teachers has decreased, so has the number of schools with high concentrations of underprepared teachers. In 2000-01, just 41% of public K-12 schools had 5% or fewer underprepared teachers (Shields et al., 2001). In 2006-07, the percentage of public K-12 schools with 5% or fewer underprepared teachers was 73%. Yet, a subset of the state’s schools continues to face significant

staffing challenges. Statewide, 4% of schools (344 schools) had faculties with 20% or more underprepared teachers (see Exhibit 5). These schools serve approximately 196,000 students and are located in 37 of the state’s 58 counties. Most of these schools are found in urban areas. Charter schools make up almost half (47%) of the schools in this category but serve only about 40,000 of the 196,000 students in schools with 20% or more underprepared teachers.



Although the total number of underprepared teachers is shrinking, these teachers continue to be concentrated in a small percentage of the state's 58 counties: approximately 80% of the state's underprepared teachers are located in 10 counties, primarily in the Bay Area and central and southern California (see Exhibit 6).

As shown in Exhibit 4, there were more first- and second-year teachers in the workforce in 2006-07 than in the prior three years. Slightly over half (51%) of the

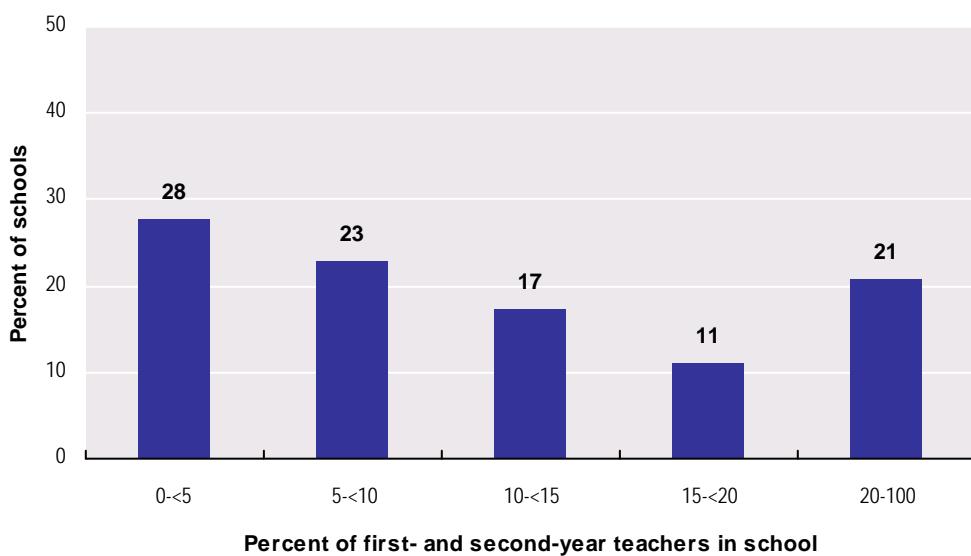
state's schools had low concentrations of novice teachers (less than 10% of the faculty were novice teachers), making it easier for these schools to provide the support new teachers need to succeed in their first years of teaching. Unfortunately, there continues to be a subset of schools with high concentrations of novice teachers. As was the case in 2005-06, 21% of the state's schools in 2006-07 had high concentrations of novice teachers (20% or more of the faculty) (see Exhibit 7).

**Exhibit 6**  
**Top 10 California Counties, by Number of Underprepared Teachers and Percentage of Underprepared Teachers, 2006-07**

County	Number of Underprepared Teachers	County	Percent of Underprepared Teachers (as a percent of all teachers in the county)
Los Angeles	5,892	Imperial	12.5
San Bernardino	1,165	Yuba	8.3
Riverside	948	Merced	7.5
Alameda	723	Los Angeles	7.4
Santa Clara	719	Monterey	6.8
Orange	713	Contra Costa	6.8
San Diego	631	Alameda	6.5
Contra Costa	574	Lassen	6.0
Kern	479	San Bernardino	6.0
San Joaquin	378	Kings	6.0

*See Appendix D for source and technical information.*

**Exhibit 7**  
**Distribution of Schools by School-Level Percentage of Novice Teachers, 2006-07**



*See Appendix D for source and technical information.*

*“...schools in the lowest achievement quartile continue to have a higher percentage of underprepared teachers, on average, than schools in the highest achievement quartile.”*

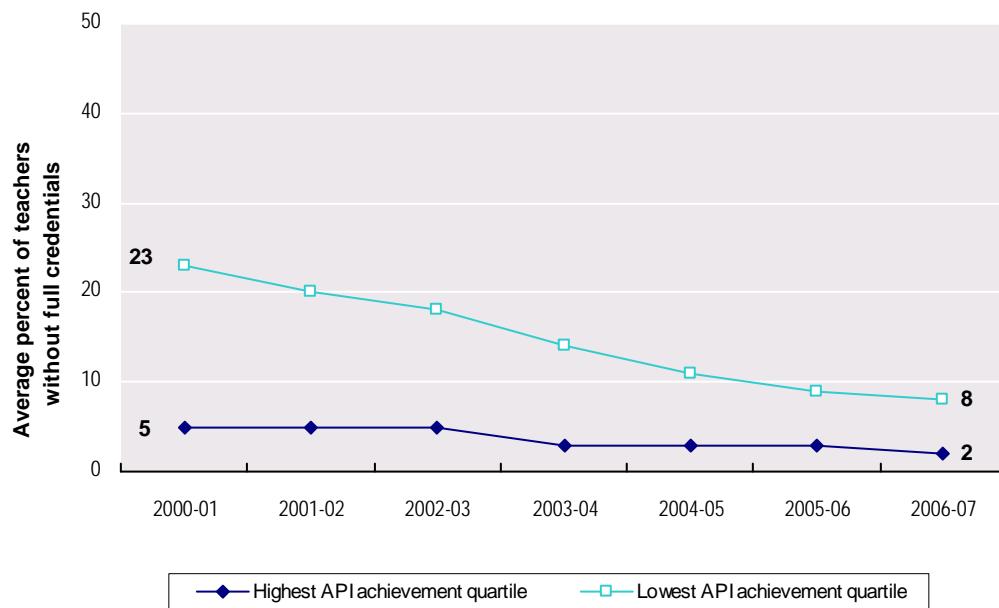
### **Distribution of Underprepared and Novice Teachers by School Achievement**

Over the past decade, we have tracked the distribution of the underprepared teacher population across schools with different characteristics. Overall, the underprepared teacher population is shrinking and schools of all types—high and low performing, high and low poverty, high and low minority—have seen decreased percentages of underprepared teachers in their schools. In 2000-01, on average, 23% of the faculty in schools in the lowest API achievement quartile were underprepared, in contrast to 5% in schools in the highest achievement quartile. By 2006-07, this 18-percentage-point difference between high- and low-performing schools had shrunk to 6 percentage points (Exhibit 8).

In spite of this progress, schools in the lowest achievement quartile continue to have a higher percentage of underprepared teachers, on average, than schools in the highest achievement quartile.

Interns—a subgroup of underprepared teachers—continue to be concentrated in the lowest-performing schools. Although considered highly qualified for the purposes of NCLB, interns have yet to complete their pedagogical training. In 2006-07, out of more than 6,400 interns in the state for which school achievement data were available<sup>4</sup>, 54% were teaching in schools in the lowest achievement quartile (see Exhibit 9). On average, interns accounted for 5% of the faculty in the schools in the lowest achievement quartile, compared with just 1% in schools in the highest achievement quartile.

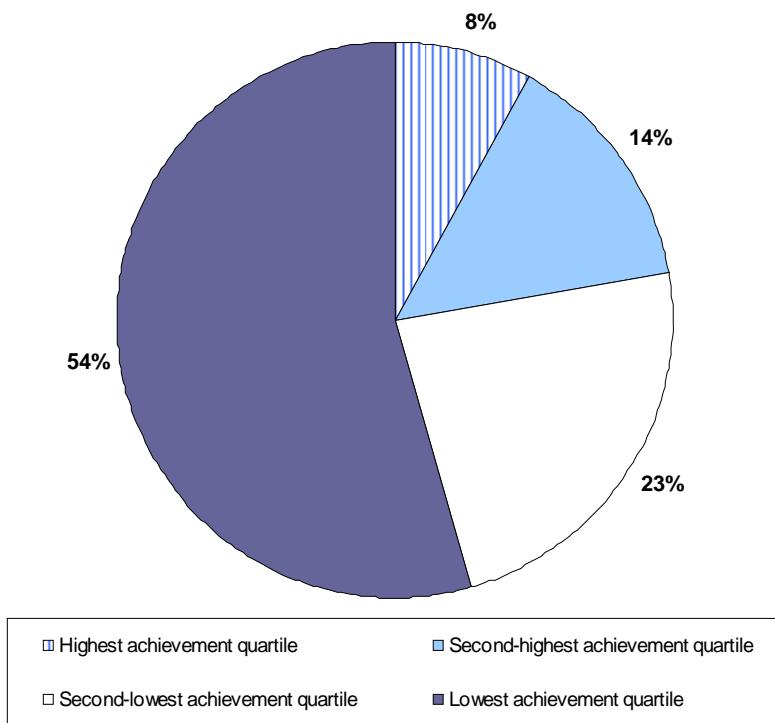
**Exhibit 8**  
**Average Percentage of Underprepared Teachers in Schools in the Highest and Lowest API Achievement Quartiles, 2000-01 to 2006-07**



*See Appendix D for source and technical information.*

<sup>4</sup> According to the CCTC, there were over 8,100 interns in 2006-07. See <http://www.ctc.ca.gov/educator-prep/intern/> for more information.

**Exhibit 9**  
**Distribution of Interns by School-Level API, 2006-07**

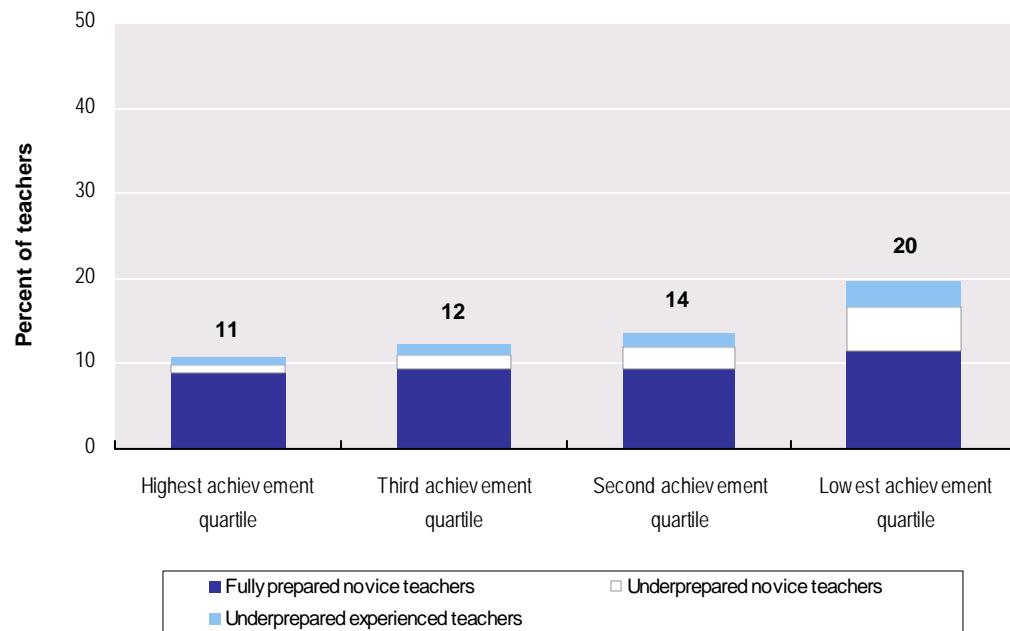


*See Appendix D for source and technical information.*

We also track the concentration of both underprepared and novice teachers in particular types of schools. Our concern is that teachers with large portions of their faculty underprepared and/or novice may have too many teachers who need extra support and too few able to provide that support. In 2006-07, underprepared and novice teachers in schools in the

third, second, and lowest achievement quartiles represented 12%, 14%, and 20% of faculty, respectively. Underprepared and novice teachers made up 11% of faculty in the highest-achievement schools (see ). These percentages have remained relatively constant since 2004-05.

**Exhibit 10**  
**Percentage of Underprepared and Novice Teachers, by API Achievement Quartile, 2006-07**

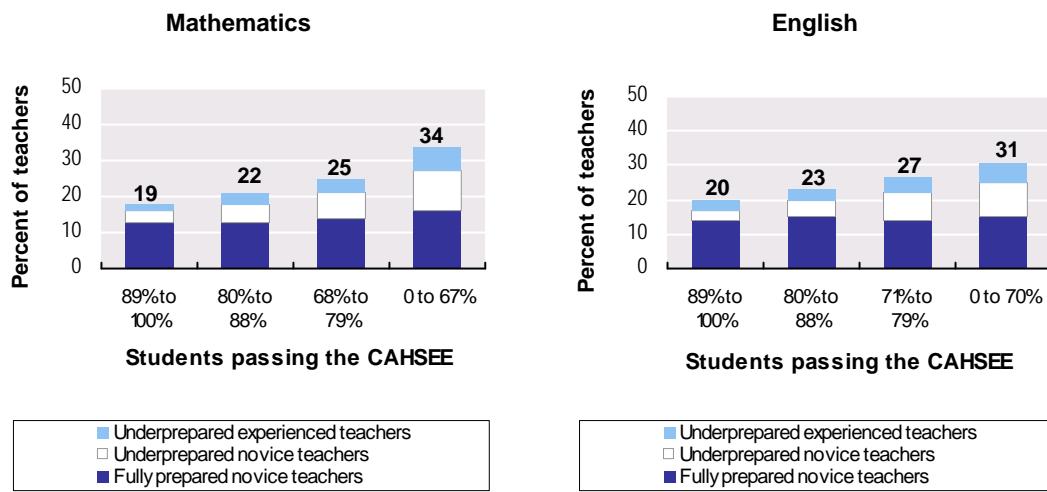


*See Appendix D for source and technical information.*

In addition to the API, we take a more in-depth look at one of the exams that make up the API, the California High School Exit Examination (CAHSEE). More than one-third of underprepared and novice secondary teachers (34%) were located in schools with the lowest pass rates on the CAHSEE math exam in 2006-07.

Thirty-one percent of underprepared and novice secondary teachers taught in schools with the lowest pass rates on the CAHSEE English exam (see Exhibit 11).

**Exhibit 11**  
**Percentage of Underprepared and Novice Teachers,  
 by School-Level Percentage of 10th-Grade Students Passing the CAHSEE, 2006-07**



See Appendix D for source and technical information.

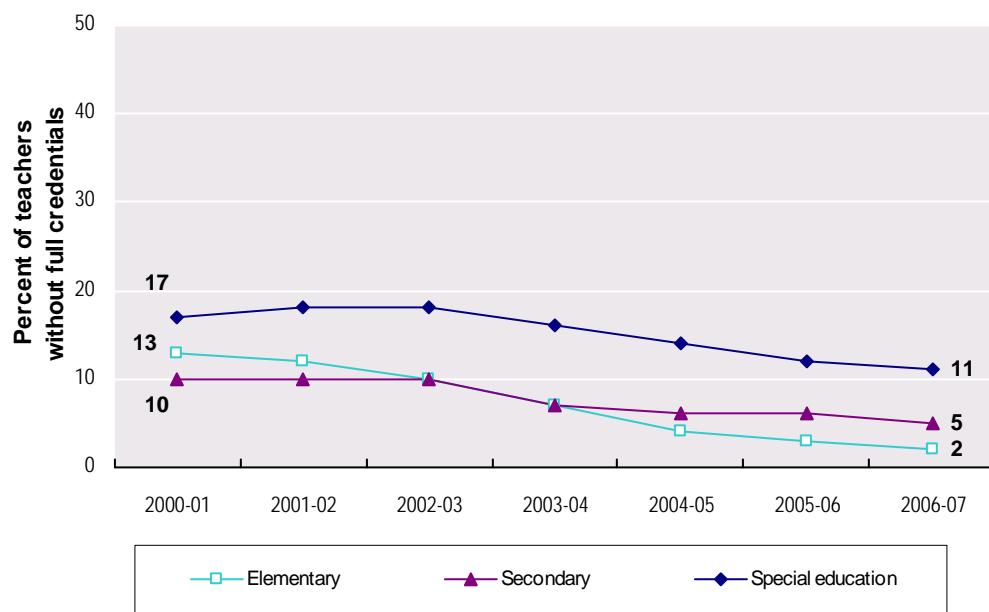
*"Since 2000-01, the most significant drop in underprepared teachers occurred at the elementary level."*

## AUTHORIZATIONS AND ASSIGNMENTS

In addition to tracking the overall number, percentage, and distribution of underprepared and novice teachers, we also track information on how the shortage of fully credentialed teachers has affected elementary and secondary schools, as well as specific teaching assignments. Since 2000-01, the most significant drop in underprepared teachers occurred at the elementary level. In 2000-01, 13% of elementary teachers in the

state were underprepared, compared with just 2% by 2006-07. The secondary level and special education experienced more modest declines in the percentage of underprepared teachers between 2000-01 and 2006-07. In 2000-01, 10% of secondary teachers were underprepared, compared with 5% in 2006-07. In 2000-01, 17% of special education teachers were underprepared; after a slight increase, the proportion declined to 11% by 2006-07 (see Exhibit 12).

**Exhibit 12**  
**Percentage of Underprepared Teachers, by Authorization, 2000-01 to 2006-07**



*See Appendix D for source and technical information.*

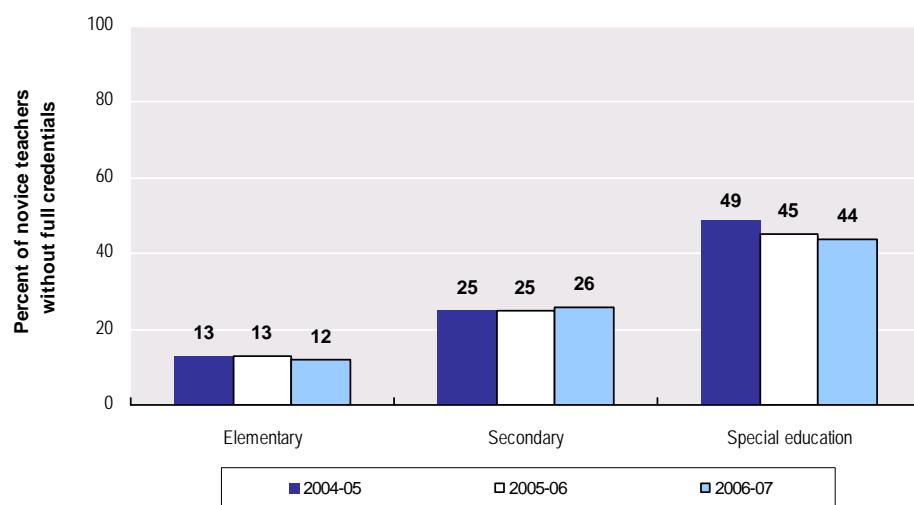
Although the declines in the overall percentages of underprepared teachers are welcome, the number of novice teachers who are underprepared remains high, especially at the secondary level and in special education. Approximately one-quarter (26%) of novice secondary teachers were underprepared in 2006-07. Special education continues to fare the worst of the three authorizations. In 2006-07, 44% of special education novice teachers were underprepared (see Exhibit 13). These figures show that schools are still having a difficult time finding fully prepared new teachers, especially in special education.

Underprepared teachers at the secondary level are only part of the challenge of staffing secondary classrooms. Because of the specialized knowledge secondary teachers need to teach each content area and the fluctuating student demand for courses each semester, secondary schools often find that they do not have enough fully credentialed teachers to teach all the courses students want or need to take each

semester. One way to staff courses for which fully credentialed teachers are not available is to ask fully credentialed teachers to teach courses not covered by their credentials. We refer to these teachers as teaching “out-of-field.” We have tracked these out-of-field teachers since 2003-04. Mathematics, English, and life science have all experienced increases and then decreases in the percentage of out-of-field teachers since 2003-04. At the same time, the percentage of out-of-field physical science teachers has dropped each year over this same period. In 2003-04, physical science had the distinction of having the highest percentage of out-of-field teachers—23% of physical science teachers did not hold the proper physical science credential. By 2006-07, the percentage of physical science teachers who were out-of-field had dropped to 19%. Social science had the highest percentage of out-of-field teachers (21%) (see Exhibit 14).

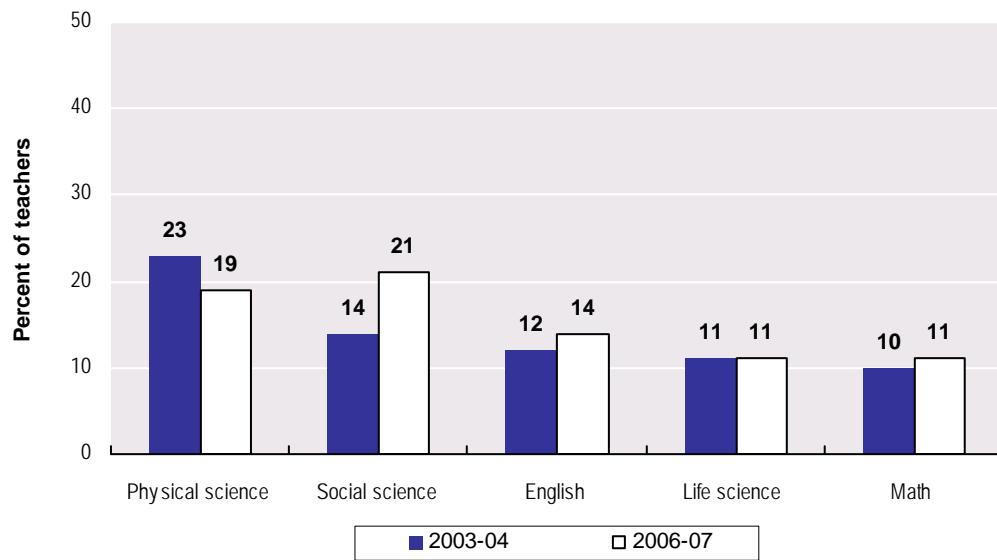
*“...the number of novice teachers who are underprepared remains high, especially at the secondary level and in special education.”*

**Exhibit 13**  
**Percentage of Underprepared First- and Second-Year Teachers, by Authorization, 2004-05 to 2006-07**



*See Appendix D for source and technical information.*

**Exhibit 14**  
**Percentage of Out-of-Field High School Teachers in Core Subjects,  
2003-04 and 2006-07**



*See Appendix D for source and technical information.*

In addition to out-of-field high school teachers, the prevalence of eighth-grade mathematics teachers who do not hold a single-subject credential in mathematics is of concern. Given that algebra content has been moved into the eighth-grade curriculum, middle school mathematics teachers need specialized knowledge to teach algebra content that traditionally has been taught at the high school level. Of middle school algebra teachers in 2006-07, 24% were fully

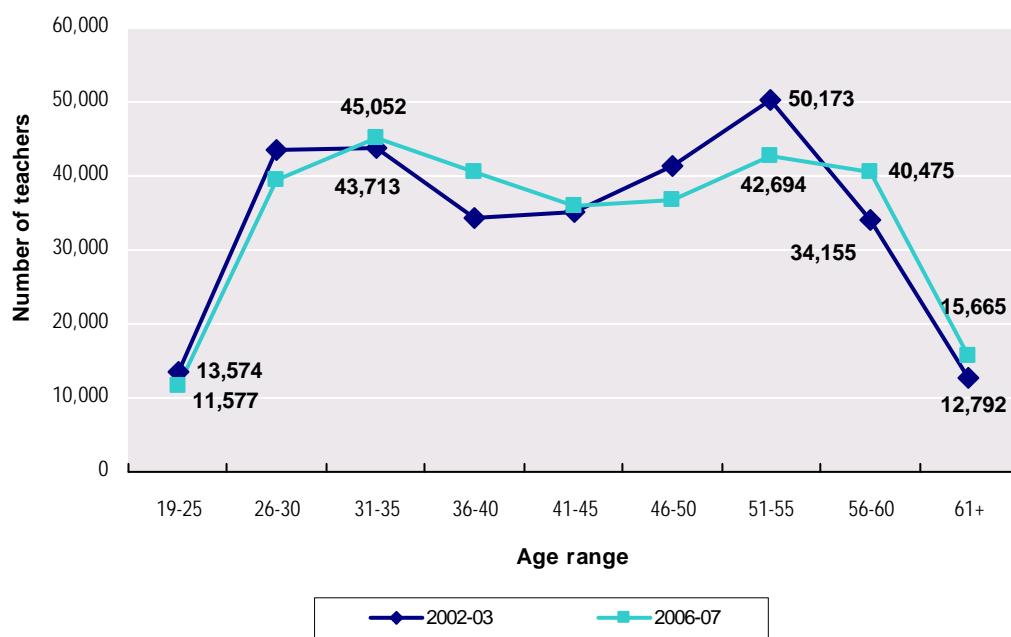
credentialed in some subject area but lacked a mathematics authorization. These out-of-field teachers taught nearly 54,000 students statewide. An additional 8% of middle school mathematics teachers did not hold a full credential of any kind. These underprepared teachers taught approximately 20,000 students statewide. Thus, more than 74,000 students were enrolled in middle school algebra classes in which the teacher may not have been adequately prepared to teach the subject.

## LOOKING AHEAD

California has made great strides in reducing the underprepared teacher population, yet looming retirements and waning production of new teachers may reverse this trend. Approximately one-third

(32%) of the teacher workforce was over 50 years old in 2006-07. Over the past 5 years, the population of teachers 51 or older has grown slightly, from 97,120 in 2002-03 to 98,834 in 2006-07 (see Exhibit 15).

**Exhibit 15**  
**Age Distribution of K-12 Public School Teachers, 2002-03 and 2006-07**

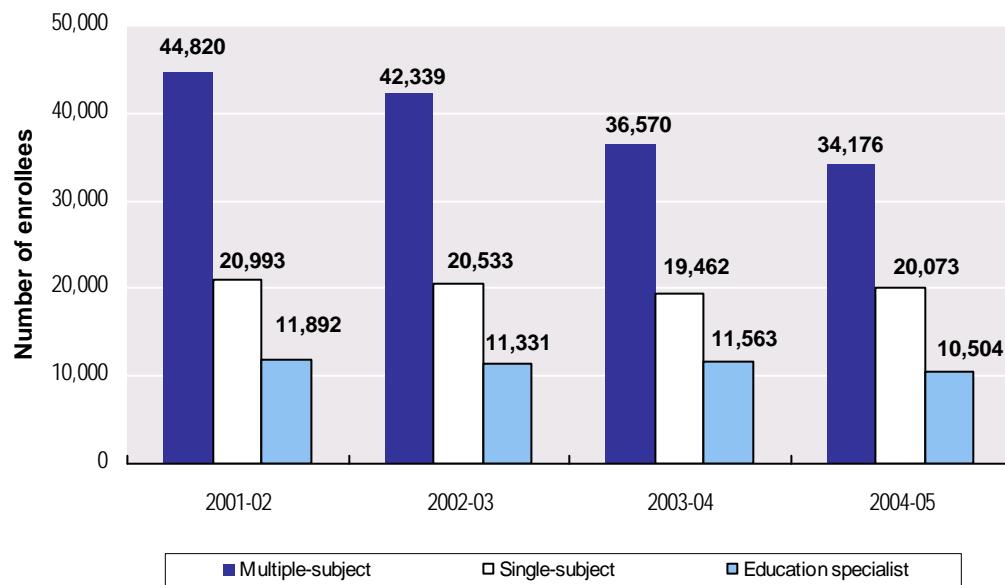


See Appendix D for source and technical information.

Declining enrollments and credentials issued suggest that teacher preparation programs are not poised to respond to the demand that will be created by a wave of retirements. Between 2001-02 and 2004-05 (the last four years for which data are available), overall enrollment in teacher preparation programs declined (see Exhibit 16).

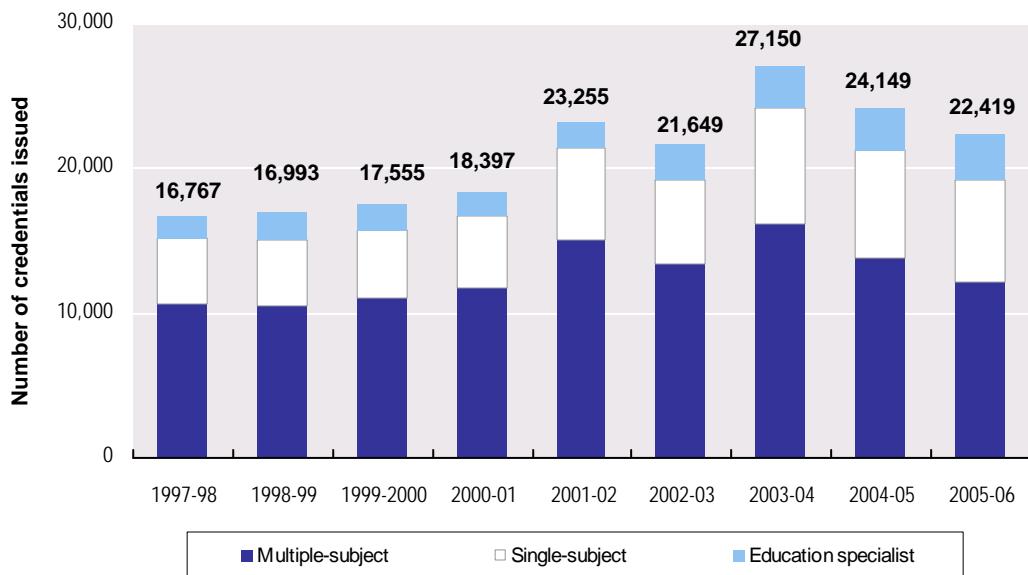
In addition, production of preliminary credentials fluctuated from 23,255 in 2001-02 to a high of 27,150 in 2003-04 and back down to below the 2001-02 level at 22,419 in 2005-06 (the last year for which data are available) (see Exhibit 17).

**Exhibit 16**  
**Number of Enrollees in Teacher Preparation Programs, 2001-02 to 2004-05**



*See Appendix D for source and technical information.*

**Exhibit 17**  
**Number of New Preliminary Teaching Credentials Issued, 1997-98 to 2005-06**

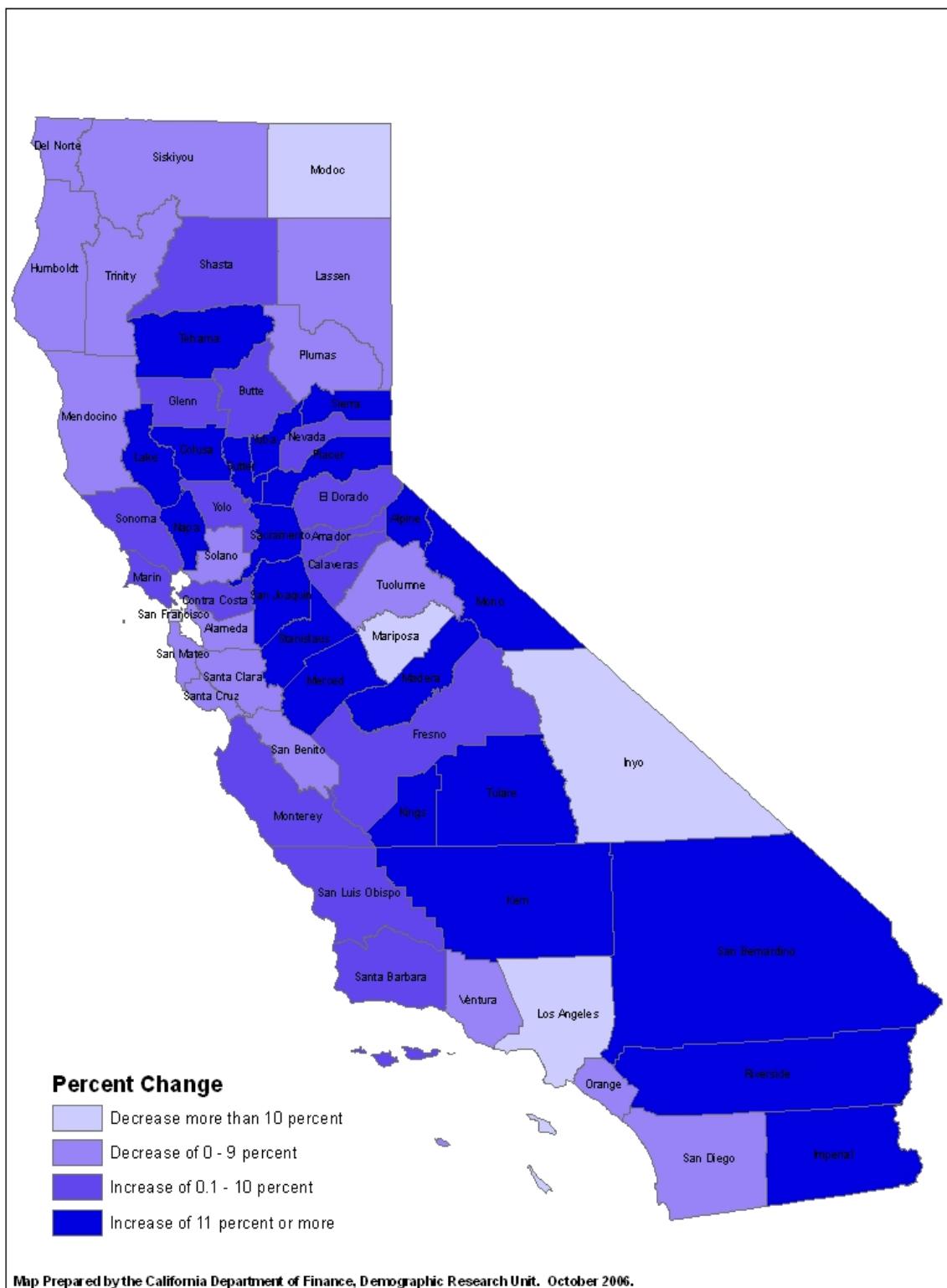


*See Appendix D for source and technical information.*

It is important to keep in mind that while teacher retirements and lower credential production may trigger teacher shortages statewide, not all regions of California will be affected in the same way, mainly because of differences in projected student enrollments. As a whole, the state of California is growing. However, certain regions of the state anticipate declining student enrollments, which may offset some or all of the need to replace retiring

teachers in these regions. However, certain regions of the state with projected student enrollment increases may be more heavily affected by any future teacher retirements. Counties located in the Inland Empire (e.g., San Bernardino), central valley, central coast, and northern California (e.g., Placer, Butte, and Shasta) are expected to have positive student enrollment growth (see Exhibit 18).

**Exhibit 18**  
**Public K-12 Enrollment Change, 2005-15**



See Appendix D for source and technical information.

## CONCLUSION

At the beginning of the decade, 14% of California's teacher workforce had not completed their preparation before becoming teachers. Reducing the number of underprepared teachers became a priority as NCLB and the *Williams* settlement<sup>5</sup> established credential expectations for the teacher workforce. In response, the state invested in teacher recruitment, the state university system expanded its teacher preparation programs, and funds were invested to support new underprepared teachers. The data presented here show that progress has been made. Since 2001-02, the state has reduced the overall number of underprepared teachers across all types of schools.

Yet challenges remain. In 2006-07, nearly a quarter of new teachers entered the workforce underprepared, and almost half of new special education teachers had not completed their preparation before they began working. Further, the achievement gap between students of different racial, ethnic, and economic groups remains, even as the state's teacher workforce sheds its underprepared population.

Ensuring that all students have access to fully prepared teachers is only the first step toward ensuring that all students also receive high-quality instruction. The fact that 95% of the state's classrooms are staffed by fully prepared teachers offers a window of opportunity for focusing on the quality of teaching. Now is the time for a focused effort on measuring and supporting teaching quality across the entire teacher development continuum while also continuing to ensure that teachers meet the minimum qualifications.

This year's research investigates how teaching quality is measured and to what extent the data are used to support high-quality teaching throughout the entire teacher development continuum. In the following chapters, we explore how teacher preparation programs, school districts, and schools measure and use data on teaching quality.

*"In 2006-07, nearly a quarter of new teachers entered the workforce underprepared, and almost half of new special education teachers had not completed their preparation before they began working."*

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<sup>5</sup> See <http://www.cde.ca.gov/eo/ce/wc/> for more information on the *Williams* settlement.



## CHAPTER 3

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# TEACHER PREPARATION

Enrollment in a teacher preparation program marks the start of formal training and the beginning of the state's teacher development continuum. It is during the preparation phase of a teacher's career that policymakers have the greatest influence in shaping the skills, attitudes, and beliefs of future teachers. Our analysis of the mechanisms used to measure teaching quality during preparation finds that a great deal of information is collected; however, too often the information is not of high quality and is not used to improve the abilities of teacher candidates.

### Key Findings:

- California's teacher preparation programs include multiple opportunities to assess teaching quality: at admission, throughout coursework, during student teaching, and, beginning in 2008, through the Teaching Performance Assessment.
- Teacher candidates' content knowledge typically is reviewed only during the admission process, and information collected is not used to inform a candidate's preparation.
- Teacher educators are particularly concerned about teacher candidates' beliefs and attitudes, but admission processes do not systematically measure these characteristics.
- Typically, methods used to evaluate teacher candidates' coursework do not yield objective measures to differentiate skills among candidates. Embedded assessments offer a promising way to address this shortcoming.
- Student teaching provides the greatest opportunity to assess candidates' teaching quality, but few opportunities exist for training and supporting master teachers and university supervisors, the individuals who best can evaluate candidates' attributes.
- The Teaching Performance Assessment provides an opportunity to align and strengthen data collection and analysis, if thoughtfully crafted. Without careful planning, the TPA may simply add another layer of unused data.

*“...a great deal of information is collected; however, too often the information is not of high quality and is not used to improve the abilities of teacher candidates.”*

We begin our discussion of teaching quality measures with a brief description of the teacher preparation structure in California. We then turn to an analysis of the information on candidates that preparation programs collect at admission, during coursework, and during student teaching. We also present a brief discussion of the Teaching Performance Assessment. Finally, we present general conclusions about the teacher preparation system as a whole.

## THE TEACHER PREPARATION STRUCTURE

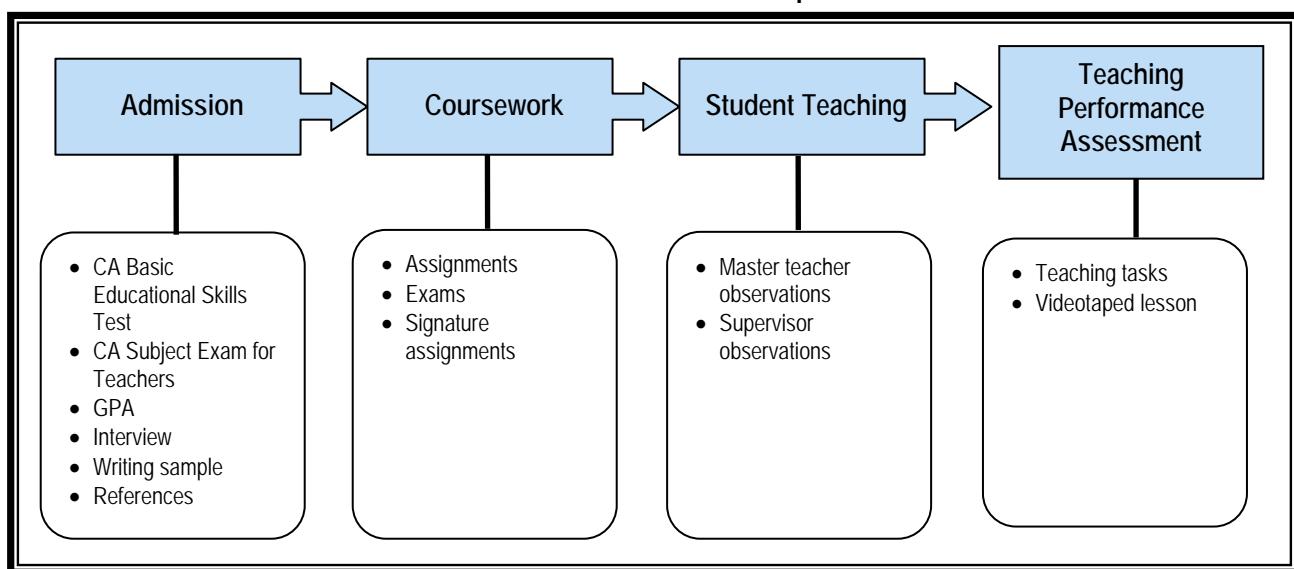
*California's teacher preparation programs include multiple opportunities to assess teaching quality: at admission, throughout coursework, during student teaching, and, beginning in 2008, through the Teaching Performance Assessment.*

California's teacher preparation programs, in the aggregate, are the largest in the nation, having supplied more than 118,592 newly credentialed teachers from 2001-02 through 2005-06. Most candidates enter teacher preparation programs as full-time candidates completing a 5th year, postbaccalaureate program. Other routes exist, such as blended programs in which students earn a bachelor's degree and teaching credential simultaneously, and intern programs in which they begin teaching while earning a credential.

In each of these routes, a great deal of time and effort is spent collecting information about candidates' strengths and weaknesses during the various phases of teacher preparation (i.e., admission, coursework, student teaching, and Teaching Performance Assessment). Preparation programs collect information about a candidate's aptitude for teaching via test scores, grade point averages, interviews, letters of reference, writing samples, coursework assignments and exams, and actual teaching practice in classroom observations. Exhibit 19 lists the typical measures used during each phase.

We turn now to a discussion of the quality and use of the various types of information collected, examining the range of practices evident in the case study preparation programs.

**Exhibit 19**  
**Phases and Measures of Teacher Preparation**



## ADMISSION

Admission to a preparation program is the first gate to entering the teaching profession. Candidates are admitted to a program largely on the basis of their subject matter competency and their dispositions for teaching, including their attitudes and beliefs (see Appendix C, Exhibit C-1, for sample admission requirements).

### Content Knowledge

*Teacher candidates' content knowledge typically is reviewed only during the admission process, and information collected is not used to inform a candidate's preparation.*

Measuring content knowledge during admission is of utmost importance to many preparation programs since most programs do not address content knowledge during coursework and student teaching. Teacher preparation programs, in general, are not designed to provide content knowledge. As faculty and leaders noted in interviews, teacher preparation is not structured to include content knowledge, and there simply is not enough time to cover both pedagogy and content in a two- or three-semester program. Therefore, programs rely heavily on the measures in place during admission to ensure strong basic skills and subject matter knowledge.

One common measure of content knowledge is a candidate's undergraduate grade point average (GPA). Nearly all programs require a minimum undergraduate GPA, which ranges from 2.67 to 3.0, though the emphasis they place on GPA varies across institutions. Admissions officers at one program noted that the undergraduate GPA weighs heavily in admission decisions because they believe it is a strong indicator of work ethic and future performance in teacher preparation courses. Some programs with larger applicant pools go beyond grades alone and include writing samples, undergraduate major, and courses taken in evaluating a candidate's content knowledge. At a selective program in southern California, both the dean of the college and the single-subject coordinator reported that they prefer candidates who have majored in the subject they wish to teach. This program also prefers multiple-subject candidates with strong mathematics skills. In contrast, faculty at two private

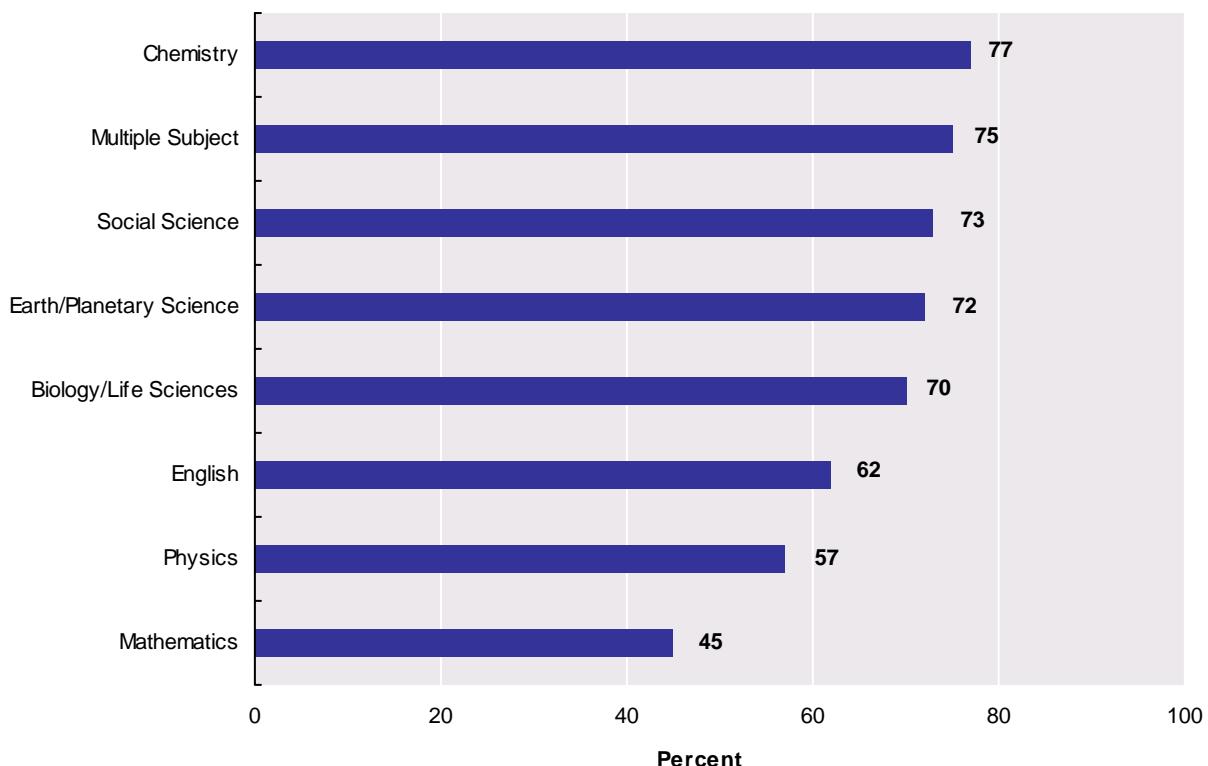
programs visited reported that they do not weigh GPA heavily in the admission process and instead prioritize other measures of content knowledge and other candidate characteristics, such as their attitudes, beliefs, and commitment to teaching.

Beyond a candidate's GPA and college major, programs rely on the passage of standardized tests to assess content knowledge. Currently, passage of the California Basic Educational Skills Test (CBEST) is used to demonstrate basic skills. SB 1209 allows candidates to substitute the Graduate Record Examination (GRE), ACT, or Scholastic Aptitude Test (SAT) scores to meet basic skills requirements; however, faculty in the case study programs report that they are awaiting a definition of passing scores on these exams before using them in admissions. Although state regulations require passing scores on both the California Subject Examinations for Teachers (CSET) and the CBEST prior to beginning student teaching, most preparation programs use them as admission requirements.

As a measure of basic skills and subject matter competency, the majority of university faculty reported that CBEST and CSET were sufficient. However, a few faculty members raised some concerns, particularly about the CSET. For example, faculty in two programs we visited felt that the CSET was an insufficient measure of subject matter competency, noting that some of their candidates have passed the exams but still struggle with content. Faculty also noted that passing the CSET was a barrier to candidates for whom English is not the first language. Faculty at three other programs discussed the difficulties their multiple-subject candidates have in passing the CSET, noting that these difficulties affect the number of candidates applying to their multiple-subject programs.

Passing rates for the CSET indicate that it is indeed a difficult test for a portion of candidates. Over 80% of multiple-subject CSET test takers passed between 2003 and 2005; three-quarters of test takers passed on their first try in 2004-05. Single-subject tests are somewhat more of a hurdle for candidates—most notably in mathematics, where fewer than 50% of the candidates pass (see Exhibit 20).

**Exhibit 20**  
**2004-05 CSET Pass Rates for First-Time Test Takers**



*See Appendix D for source and technical information.*

The CSET is intended to serve as a screen so that only individuals with sufficient content knowledge go into teaching, and the passage rates suggest that it is successfully identifying candidates who may not have the prerequisite content knowledge to teach. The question raised, then, is whether the CSET is providing the appropriate level of screening by keeping out weak candidates while allowing all high-quality candidates through.

Though they have set minimum content knowledge requirements for admissions, many programs allow for some leeway. The CSU system allows campuses to admit 15% of candidates with waivers, and each of the five CSU campuses visited for this study reported using the full 15% almost exclusively to waive content knowledge requirements. One campus we visited used its waivers primarily to admit students who do not meet the minimum GPA or pass the CBEST; two other programs used their waivers nearly entirely to admit candidates who have not passed the CSET (although the state requires candidates to eventually pass the CSET and CBEST prior to student teaching). In addition to waivers, one case study program has created a pre-teaching program (“pre-requisite stage”) for candidates who have not yet met admission

requirements. The pre-teaching program allows candidates to begin working toward their credential before being fully admitted to the program. The dean of the college explained that the pre-teaching program is the only way to admit some of the candidates:

*“You can’t be admitted without these things (pre-requisites), so we now have a stage that’s called pre-requisite.... You’re not formally admitted, but you’re admitted to the pre-requisite stage. It’s the only way you get around some of the requirements.”*

Preparation programs waive admission requirements for various reasons, including the desire to allow in students who seem quite strong on the basis of their other qualifications or to fill open slots. However, while programs may admit candidates who have not demonstrated content knowledge, candidates must still pass the CSET before beginning fieldwork, since state law requires that candidates demonstrate both basic skills and content knowledge prior to student teaching.

Between undergraduate GPA and major, and CBEST and CSET results, admission requirements provide much information about candidates’ content

*“...admission requirements provide much information about candidates’ content knowledge. However, aside from serving as an entry gate into a program, the information rarely is used to inform faculty about the specific needs of candidates...”*

knowledge. However, aside from serving as an entry gate into a program, the information rarely is used to inform faculty about the specific needs of candidates or to tailor programs to address those needs. For example, candidates who are admitted to programs on waivers clearly need to boost their subject matter knowledge, but most programs do not require these candidates to take subject matter classes. Further, admissions officers do not share information about which students are admitted with waivers with university professors, limiting the ability of faculty to offer targeted assistance or tailor their instruction. There are exceptions, however. Two preparation programs, for example, direct students with low CSET and CBEST scores to workshops, writing centers, and other supports to help them further develop their content knowledge and pass the exams.

#### **Making Connections: Content Knowledge and Pedagogy**

Blended programs allow candidates to simultaneously earn a bachelor's degree and a teaching credential. Unlike traditional programs that measure content knowledge only during admissions, blended programs have the capacity to combine measurement of content knowledge and pedagogy throughout the duration of the program.

In a blended multiple-subject credential program, we found a strategy to directly link training in content area with teaching practice through "themed" semesters. Students take math in the math department concurrent with their math pedagogy course in the education department. Similarly, they take science and English courses during the same semester that they take pedagogical courses in these fields. Professors from both departments work together, comparing field and classroom experiences to ensure that candidates are making the right connections.

The ability of programs to use content knowledge measures to support candidates is problematic, in part, because of the way scores are reported. Most preparation programs do not receive candidates' actual test scores; rather, they receive pass or fail notifications from the testing service. Therefore, even for candidates who have passed the exams, faculty do not know whether their content knowledge is particularly strong or they just met the minimum requirements. Likewise, they do not know whether one section or another is a particular struggle for a candidate. In programs that do

request specific test scores from the candidates themselves, teaching faculty would need to request the information from the admissions office to learn about their particular students. Faculty and admissions offices reported that such requests are virtually never made.

Whether the information is used or not, measuring content knowledge is fairly straightforward with GPAs and test scores. Faculty in preparation programs, however, also are interested in identifying teacher candidates who have the attitudes and beliefs that they believe make for high-quality teaching. These traits are much more difficult to measure, as we describe next.

#### **Attitudes and Beliefs**

*Teacher educators are particularly concerned about teacher candidates' beliefs and attitudes, but the admission processes do not systematically measure these characteristics.*

Individuals in the teaching profession generally agree that dispositions, beliefs, and attitudes, are important for high-quality teaching. The first candidate performance standard of the National Council for Accreditation of Teacher Education (NCATE) is "Candidate Knowledge, Skills, and Dispositions." Although teacher educators in the case study programs agree that a candidate's beliefs and attitudes about children and learning are important, they do not uniformly collect and analyze data about these traits in their candidates.

#### **From the NCATE Glossary of Terms**

##### **Dispositions:**

The values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator's own professional growth.

Dispositions are guided by beliefs and attitudes related to values such as caring, fairness, honesty, responsibility, and social justice. For example, they might include a belief that all students can learn, a vision of high and challenging standards, or a commitment to a safe and supportive learning environment.

When they are measured, attitudes and beliefs about children and education are measured with references and interviews. For example, a small private program interviews all candidates to look for students who share a passion for social justice and who have worked with youth in the past—an indication, faculty believe,

*“...information that is collected on a candidate’s content knowledge and dispositions is not shared with those charged with preparing candidates for teaching.”*

that the candidates are committed to the profession. Another program asks candidates to discuss their views about working with diverse students, their opinions about the characteristics of good teachers, and their experience working with children. Yet another program focuses interviews on candidates’ purposefulness, communication skills, and commitment to teaching. Two programs we visited go beyond interviews; admissions officers speak with past professors if a candidate has taken undergraduate courses at the university, looking for information about the candidate’s potential as a teacher.

Not all programs prioritize measures of disposition. This lack of emphasis may be related to the size of the applicant pool. Among the sites we visited, those with smaller applicant pools were less able to use measures of disposition. One case study program that had a small applicant pool requires neither an interview nor letters of reference. The admissions office staff commented, “I can tell you that now, in the teacher ed program, as long as you meet the minimum requirements—because our [applicant] numbers aren’t that high—we’re not really making a judgment at that point.” The dean of this program also commented, “Right now, everybody gets in—unless they’re really bad, or unless their GPAs are really low.”

The lack of emphasis on measures of dispositions also may be due to the fact that dispositions are difficult to measure. Staff at one program noted that interviews are “a hoop to jump through that nobody puts a lot of importance in.” This same program requires candidates to submit a statement of their philosophy of teaching, but staff feel this statement is a limited and inadequate measure of disposition. Given the skepticism over the value of disposition measures, it is not surprising that the information that is collected generally is not used. One program, for example, requires interviews and references but does not use the information gained; it accepts all applicants who meet the minimum requirements.

Both content knowledge and dispositions are measured during admission, but there are questions about the accuracy of these measures, particularly measures of disposition. Also, although content knowledge is measured in nearly all programs, requirements for admission may be waived in some programs. Further, the information that is collected on a candidate’s content knowledge and dispositions is not shared with those charged with preparing candidates for teaching. In the following sections, we report on the measures employed once candidates are accepted into a program.

## COURSEWORK

*Typically, methods used to evaluate teacher candidates’ coursework do not yield objective measures to differentiate skills among candidates. Embedded assessments offer a promising way to address this shortcoming.*

Once admitted to a preparation program, teacher candidates are required to complete a variety of courses, most focusing on pedagogical skills. Faculty assess aspects of teaching quality in each course through assignments and exams, but there are no uniform course standards or grading schemes, making it difficult to differentiate skills among candidates and adapt programming accordingly.

In addition to typical coursework, several of the programs we visited had implemented embedded signature assignments into courses, which can address this limitation. Signature assignments are end-of-course assignments designed to demonstrate mastery of the Teaching Performance Expectations (TPEs) that all California teachers need to know before receiving a preliminary credential (see Appendix C, Exhibit C-2, for a description of the TPEs). Signature assignments might include child case studies, analyses of student learning, or curriculum and teaching analyses. They vary across programs to fit particular programming needs (see Exhibit 21 for a sample signature assignment).

**Exhibit 21**  
**Signature Assignment: Mathematics Lesson Plan**

This assignment is structured to enable you to demonstrate your skills toward meeting the following Teaching Performance Expectations:

- TPE 1A Subject-Specific Pedagogical Skills for Multiple Subject Teaching Assignments
- TPE 2 Monitoring Student Learning During Instruction
- TPE 4 Making Content Accessible
- TPE 10 Instructional Time

Specifically:

- You will demonstrate your ability to create a standards-based mathematics lesson appropriate to the level of your students.
- You will demonstrate your ability to engage all learners.
- You will demonstrate your ability to make the lesson content accessible to all learners by integrating manipulatives and by differentiating instruction to meet the needs of English Learners and students with other needs.
- You will demonstrate your ability to scaffold student learning during the lesson.
- You will demonstrate the ability to grow professionally by evaluating your teaching of the lesson.
- You will submit your completed response and any artifacts, including *assessments, scoring sheets, checklists, and student work, to support your analysis, conclusions, and instructional decisions.*

*Utilize the information below to guide you as you complete the Extended Lesson Plan.*

**Step 1: Select the lesson focus**

- Select a lesson and identify the State Content Standards addressed by the material.
- State the instructional objective(s) accompanying the successful lesson.
- Identify the language (listening, speaking, reading, and writing) objective(s) and vocabulary accompanying the successful lesson.

**Step 2: Identify the learning strategies for the lesson**

- Describe the primary cognitive strategy the students will use, including the manipulatives necessary for this.
- Describe methods to promote students' developing and applying metacognition during the lesson.
- Discuss affective elements that are necessary and present during the lesson.

**Step 3: Create the lesson plan**

- Craft a "hook" that captures student attention as it activates prior knowledge.
- Present instruction that illustrates your modeling, questioning strategies, use of the manipulatives, and adjustment based on student understanding.
- Include a Guided Practice sequence that includes more than one problem.
- Demonstrate specific adaptations that support GATE, ELL, and at least one other category of special needs student.
- Provide examples of your whole-class "check for understanding" (mini-closure) to precede Independent Practice.
- Describe the Independent Practice, including how the students are organized for this.
- Identify any types of assessment, formative or summative, that accompany the lesson.
- Explain meaningful provisions for late arrivals or early finishers.

**Step 4: Teach the lesson**

- Document this with a copy of your teaching notes to yourself and a copy of your supervisor's observation form OR collect samples of student work that provide evidence of various levels of student understanding.

**Step 5: Reflect on your teaching**

- Write a carefully considered reflection that analyzes the lesson. Also include references to the student work samples.
- Discuss what was appropriate or went well and what needed improvement.
- Provide specific recommendations to improve the lesson as if you would teach it again.

*“The ability of university supervisors to adequately assess candidates’ teaching skills varies...”*

These assignments, if coordinated and rigorous, may provide programs with a strong analytic tool. In theory, they provide an opportunity to measure candidates’ progress toward meeting the TPEs and to provide enough detailed information to understand individuals’ strengths and areas for further development. Two programs, for example, have fully adopted embedded signature assignments in nearly all of their courses and have established rubrics to determine proficiency in the TPEs. When coordinated across courses, embedded assignments also provide an opportunity for a coherent assessment of candidates. In some case study programs, entire departments have collaborated to create uniform assignments and grading systems.

Currently, however, most preparation programs lack the time and resources to realize the promise of signature assignments. One program, for example, has created embedded assignments but does not have rubrics for grading the assignments along relevant TPEs. In this program, completion of the task is all that is necessary. In some programs, faculty have created embedded assignments completely independent of one another, making cross-assignment analysis challenging.

One struggle some programs are facing is the ability to calibrate evaluators’ scores of embedded assessments. Faculty cited a lack of time and funding to test the reliability of professors’ grading. Where there is a lack of reliability testing and where embedded assignments are developed independently across courses, their utility in analyzing candidate strengths and weaknesses may be limited.

Coursework represents one key aspect of a preparation program. Next we turn to student teaching, another major component of teacher preparation.

## **STUDENT TEACHING**

*Student teaching provides the greatest opportunity to assess candidates’ teaching quality, but few opportunities exist for training and supporting master teachers and university supervisors, the individuals who best can evaluate candidates’ skills.*

As part of their preparation, candidates are required to complete student teaching. Teacher candidates generally enter fieldwork in phases, beginning with observations of classrooms, followed by regular attendance in classrooms and gradual acceptance of

teaching responsibilities. Student teaching is completed under the supervision of a master teacher and a university supervisor, who are responsible for assessing the candidate. For interns, student teaching is completed in their own classrooms, without the guidance of a master teacher. In programs in which master teachers and supervisors receive little formal training or their scoring is not calibrated for consistency, data collected about student teaching are challenging to analyze in a productive way.

Supervisors are representatives of the university and are responsible for assessing the teaching quality of student teachers and determining grades for their practicum. The ability of university supervisors to adequately assess candidates’ teaching skills varies, depending on their relationship to the university, the amount of time spent with each candidate, and the amount of training they receive.

University supervisors can be part-time adjunct faculty or full-time faculty. There are advantages and disadvantages to each model. One program has successfully used adjunct faculty to supervise student teachers. This program uses retirees from the neighboring district who have had experience in coaching. Not only do the supervisors have relevant coaching skills, but program faculty select primarily individuals with whom they have worked in the past to ensure strong supervising. Full-time faculty supervisors have other strengths. Specifically, they have the background knowledge of candidate performance in coursework that outside supervisors do not receive, potentially allowing them to tailor support based on that information. Further, some are able to use staff meeting time to discuss trends and ways to assist struggling students, using formal and informal data collected during observation of the candidates. However, this benefit is not universal. At one university, the additional responsibility of supervising student teachers stretched full-time faculty so thin that they reported having little to no time to meet collaboratively with other faculty.

The ability of supervisors to assess teaching quality also depends on the amount of time they spend in the student teachers’ classrooms. The case study programs varied considerably in their requirements for supervisors. At one extreme, a program only requires supervisors to make some kind of contact with candidates via e-mail, phone, or in person nine times per year. At the other extreme, two programs require

weekly visits to the school site. In an isolated case, one program reduced the supervision of all candidates to ensure equitable supervision. In this situation, a program using both adjunct and full-time faculty as supervisors realized that candidates supported by adjunct faculty and retirees were receiving more classroom visits and evaluations than candidates who were supervised by full-time faculty. In response, nonfaculty supervisors were asked to reduce their visits to candidates, visiting no more than three times, or at least to make additional visits less formal to ensure that students felt equally supported across the program.

The third factor affecting the quality of supervisors' assessments of student teachers is the amount and quality of training they receive on the standards, scoring rubrics, and TPEs, which vary across programs. In two of the programs visited, supervisors receive 1 day of training at the beginning of every semester to review current practices, TPEs, subject areas, and how to train and support master teachers. At one of these programs, supervisors also meet monthly for 2 hours to review TPEs and issues that arise, including some content knowledge issues; they also discuss and review the rubrics and their use. One private program we visited provides no formal training for supervisors; however, it provides a handbook with a suggested sequence, benchmarks, and responsibilities for supervision. At the other end of the spectrum, a large program in southern California requires that supervisors hold a master's degree (almost half have Ph.D.s) and have 3 years of teaching experience. Supervisors must interview for the job and participate in training provided by coordinators. Further, supervisors receive a 300-page handbook as a reference tool to supplement their training.

Master teachers, also referred to as supervising or cooperating teachers, host the candidates in their classrooms. Like university supervisors, they assess the teaching quality of the student teachers and help them to develop their skills. Also, as with supervisors, the ability of master teachers to assess student teachers depends on a number of factors—in this case, how they were selected and the training they receive.

Selection criteria for master teachers vary, but most programs rely solely on the recommendation of principals. A program in northern California, for example, uses field coordinators who are deeply connected with the K-12 system to recruit master teachers. The coordinator meets with principals and describes the characteristics needed in a master

teacher—commitment, desire to mentor, ability to work as part of a team—and the principal selects master teachers. One program we visited requires master teachers to have at least 3 years of experience, a credential, and a recommendation from the principal; another program we visited has no requirements for master teachers. At a small private program we visited, faculty prefer to have their own graduates serve as master teachers.

Formal training for master teachers is a rarity. Most programs rely on their university supervisors to relay information about goals, processes, and the role of the master teacher. Several participants in our study cited funding as a barrier to training. Without financial incentives, programs find it difficult to require attendance at training. One program we visited is able to provide master teachers with stipends for training in how to use the TPA. Training for both supervisors and master teachers is held at the beginning of the year and covers expectations, observation techniques, and how to complete forms and use rubrics. To encourage participation in the training, the program offers \$150 to participants. This program also holds mandatory school site orientations at the beginning of each student teaching phase.

*"Formal training for master teachers is a rarity."*

#### Developing Master Teachers

A preparation program in the Bay Area is working to increase training for master teachers. In addition to providing stipends of \$350 per year, the program hopes to increase participation in training by offering master teachers the opportunity to attend college courses. Master teachers can attend a cognitive coaching course that is offered every other year, earning 3 semester units free of charge.

In addition to the factors described above that influence assessments, the quality of the scoring rubric used by both supervisors and master teachers influences the assessment of student teachers. Across most of the case study programs, the rubrics used to evaluate candidate performance are of limited value in that they usually are worded vaguely and scored inconsistently (see Appendix C, Exhibit C-3, for a sample rubric). With little training in how to use the rubrics, there is little reliability in the measures reported. Only two of the case study programs make a concerted effort to maintain reliable scoring of evaluations. These programs convene master teachers and supervisors for a day to ensure that everyone is measuring according to the same standards. In

contrast, one program does not use rubrics at all in evaluating its student teachers. Supervisors meet with candidates every other week for 15 minutes to 2 hours, depending on the need, and base evaluations on these meetings.

In addition to the challenge of establishing effective rubrics and reliable scoring, the high-stakes nature of evaluations discourages some supervisors and master teachers from accurately reflecting teaching quality in their scores. As one master teacher explained, she does not give student teachers a low score because it means they will fail the course. Instead, she gives higher marks regardless of performance and works with the candidates to improve. Recognizing this issue, another program we visited does not include master teacher evaluations in student grades.

Despite the weaknesses in evaluating student teachers, until recently these measures were the best available to discern candidates' teaching quality. The introduction of the Teaching Performance Assessment, however, can potentially be even more instructive about candidates' skills. We discuss the TPA next.

## TEACHING PERFORMANCE ASSESSMENT

*The Teaching Performance Assessment provides an opportunity to align and strengthen data collection and analysis, if thoughtfully crafted. Without careful planning, the TPA may simply add another layer of unused data.*

Beginning in the 2008-09 school year, all teacher candidates must pass a Teaching Performance Assessment designed as a culminating measure of candidates' performance on the TPEs. Additionally, TPAs will be included as a measure for program accreditation. Many programs currently are piloting TPAs. Programs may choose to participate in the California TPA (CalTPA) or a university-designed TPA that has been approved by the state. Currently, one other program has been approved by the state—PACT (Performance Assessment for California Teachers)—and one program is under review for approval—FAST (Fresno Assessment of Student Teachers). All of the TPAs are designed to measure a broad range of teaching skills and include a videotape and other evidence of teaching quality (see Appendix C, Exhibit C-4, for a sample of requirements for videotaping and other evidence used in PACT).

There is an opportunity for the TPA to align coursework with field experiences in a meaningful

way; however, preparation program faculty expressed some concerns about moving forward with TPAs. One concern was that, if improperly implemented, TPAs may simply add another layer of unused data.

Professors at one program feel the TPA tells them only what they already know about their students. Another program worried about the adoption of the TPA, fearing that it would not fit well with the assessments they have already created.

Faculty also expressed concerns about the redundancy between the TPA and the state's induction program for new teachers. Faculty at four case study programs reported that their graduates find the state's induction program to be redundant with the activities they are completing as part of the TPA; these reports were confirmed by new teachers with whom we spoke in schools and districts. One of these programs is proactively working to align TPA projects with induction and to reduce redundancy between the two programs. Some of the programs also are working with an electronic system that will allow teachers to access the work they completed for their TPA once they are full-time teachers, as a resource. At the state level, the California Commission on Teacher Credentialing has been working to remove redundancies between the TPA and teacher induction. As a result, the state's induction program has been redesigned to include a review of a candidate's TPA (see Chapter 5 of this report for more information).

Another concern about the TPAs is guaranteeing that they are scored consistently across candidates. Both the CalTPA and PACT require training for assessors. However, because full implementation of the TPA is not required until 2008, those schools that have already piloted TPAs faced challenges in assessor training, which requires a significant commitment of time and resources. Scorer training for programs using the CalTPA entails 1 full day of orientation and 2 days for each of the four individual tasks. PACT requires 2 full days of training for evaluators. Currently in its 5th pilot year, PACT has worked to improve interrater reliability in preparation for full implementation in 2008. Despite training requirements, however, not all programs have been able to train assessors effectively. At one private institution, funding has only been sufficient to train faculty in scoring TPAs; supervisors have not yet received any training. In another program, testing for consistency among scorers has been limited. The program tested the reliability of its evaluators by having two individuals score the same 28 artifacts. Because no two scores were more than one

point apart on a four-point scale, the scores were deemed reliable. Finally, another program that worked to create its own TPA abandoned the project when resources were not available to provide training or assess the reliability of measures. In contrast, at another program, faculty and university supervisors volunteer to do the scoring and receive training, including calibration meetings, designed to improve consistency and reliability in scoring. Implementation of training thus far varies across programs, depending on availability of resources. Several university faculty and administrators expressed concern that full implementation in 2008 will require greater resources than are currently available to train all TPA assessors.

The TPA is intended to ensure that teachers have the skills necessary to be effective in the classroom. By identifying teachers' strengths and weaknesses, the TPA can more effectively inform new teachers' induction and the teacher preparation program. In addition, aggregated TPA scores will be included in the accreditation process every other year, and interrater reliability scoring will be included every 6th year to measure and maintain program quality.

Through each of these mechanisms, the TPA potentially improves teacher preparation. However, if TPAs are not implemented in a way that guarantees reliable scoring, they will not be useful tools for measuring either candidate or program quality.

## CONCLUSION

Data collected during teacher preparation are compartmentalized, and information is not commonly shared between the admission, coursework, and student teaching phases of preparation. Admission information regarding content knowledge is not shared with teaching faculty, teaching faculty do not have the information necessary to differentiate instruction based on candidates' academic strengths and weaknesses, and pedagogical skills identified during coursework are not shared with supervisors or master teachers in fieldwork. Data collected during coursework and field experience are unified in their alignment with TPEs, but information from one phase does not inform the other. TPAs represent a culminating summative evaluation of teacher strengths, but this information currently does not follow candidates into the labor market, although the CCTC is working to ensure that TPAs become part of induction in the future. If designed and implemented well, TPAs with embedded signature assignments are promising vehicles for collecting information on candidates' teaching quality. However, many teacher preparation programs currently lack the capacity to realize that promise or ensure that the information gathered by the TPAs will be used well.

*"Data collected during teacher preparation are compartmentalized, and information is not commonly shared between the admission, coursework, and student teaching phases of preparation."*



## CHAPTER 4

# TEACHER HIRING

Teacher hiring is a mutual selection process by which teachers find schools where they want to apply and schools and districts try to select the best candidate for each position. Hiring provides an opportunity for districts and schools to set priorities for the knowledge and skills they desire in their teaching staffs and to establish hiring processes that distinguish potential teachers along those dimensions.

### Key Findings:

- When hiring teachers, the characteristics most valued by principals are credential status, teaching experience, and a candidate's overall fit with the school or district culture. Characteristics that are associated with student achievement, such as academic background and certification by the National Board for Professional Teaching Standards (NBPTS), are not valued as highly.
- Districts and schools typically use a small number of processes to measure the quality of teacher candidates, and those processes provide limited information on a candidate's pedagogical skills and content knowledge.
- The size and quality of the candidate pool determine the extent to which districts and schools employ multiple processes for assessing candidates or consider data on candidates' teaching quality. Low-performing, high-poverty, high-minority schools do not have sufficient applicant pools and tend not to use multiple measures to assess candidates. Low-performing schools are less able than high-performing schools to find candidates who meet their needs. In both low- and high-performing schools, when hiring is done just before the school year begins, the applicant pool is typically smaller, limiting schools' incentives to use information on candidates' teaching quality.

In this chapter, we describe the teaching quality indicators most valued by principals during the hiring process and the processes used to measure the quality of candidates. We then examine the variations in the size and quality of candidate pools and how that

variability affects schools' and districts' ability to hire strong candidates. We also examine how late hiring results in limited data collection on candidates' abilities in all kinds of schools and districts.

### HIRING PRIORITIES

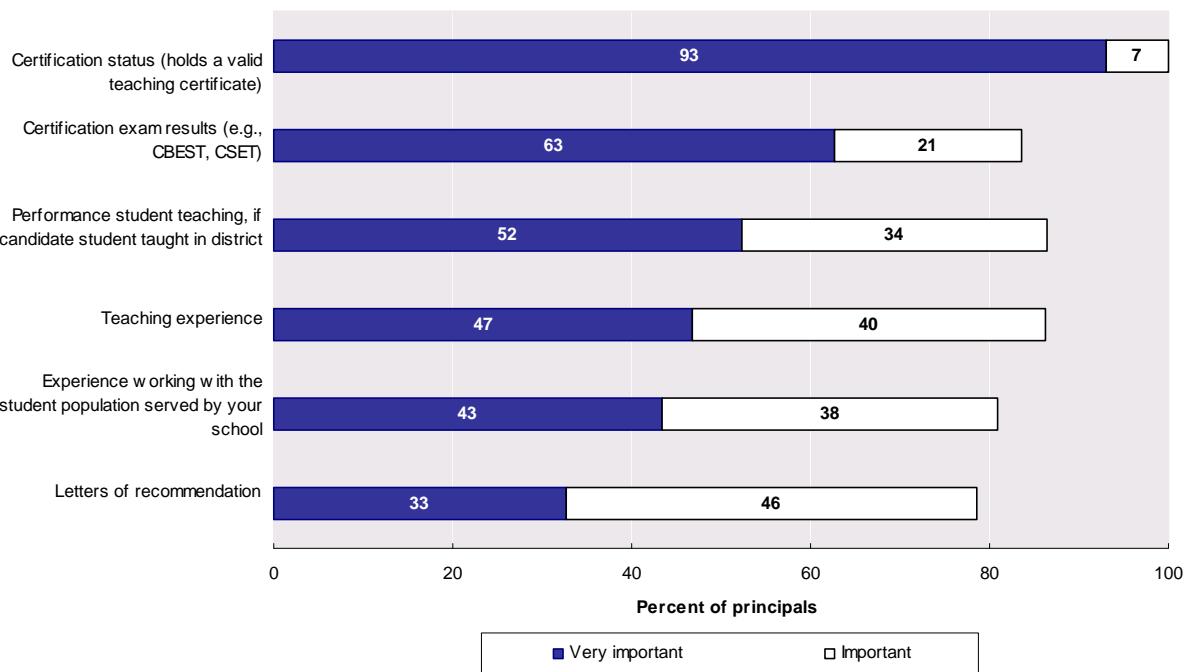
*When hiring teachers, the characteristics most valued by principals are credential status, teaching experience, and a candidate's overall fit with the school or district culture. Characteristics that are associated with student achievement, such as academic background and certification by the National Board for Professional Teaching Standards, are not valued as highly.*

When they hire teachers, school and district administrators first assess whether applicants hold appropriate credentials for the open job. Then, from the pool of teachers with appropriate credentials, they seek out candidates who possess particular qualities that fit their overall priorities. These valued characteristics cover a broad range, from a candidate's subject matter training to his or her pedagogical training or teaching experience.

Survey and case study data show that certification status is the major determinant in teacher hiring. The priority placed on certification reflects federal and state mandates that all teachers hold credentials that meet the state's "highly qualified" definition. Virtually all surveyed principals<sup>6</sup> reported that they consider certification status when making hiring decisions, and 93% view it as very important (see Exhibit 22).

<sup>6</sup> All but one principal reported that they consider certification status when making job offers. SE=0.48; n=294. Source: SRI Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers; Question 7.

**Exhibit 22**  
**Top Qualifications Reported as “Very Important” or “Important”**  
**When Making a Job Offer**



*See Appendix D for source and technical information.*

Principals also reported that they value certification exam results, another indication that candidates have met minimum qualifications.

Teaching experience also is valued highly among principals. Nearly all surveyed principals<sup>7</sup> reported that they consider teaching experience when making hiring decisions, with 47% viewing teaching experience as very important. Principals also were asked about the value they place on experience specifically working with the student population served by the school. Principals from lower-performing schools (i.e., schools in API deciles 1-6) valued experience with their specific populations more highly than did principals in higher-performing schools (i.e., schools in API deciles 7-10).<sup>8</sup> Case study data support these survey findings.

In interviews, principals in low- to mid-API schools reported that they seek out teachers familiar with their student populations, perhaps to meet specific needs of their students.

For candidates who did their student teaching in the district, their performance as a student teacher also is considered an important indicator of a high-quality candidate. Ninety-one percent of principals<sup>9</sup> reported that they consider performance during student teaching when making hiring decisions, and 52% responded that this experience is very important.

In addition to credential status and teaching experience, interviewed school personnel cited the importance of “fit” when evaluating candidates for a

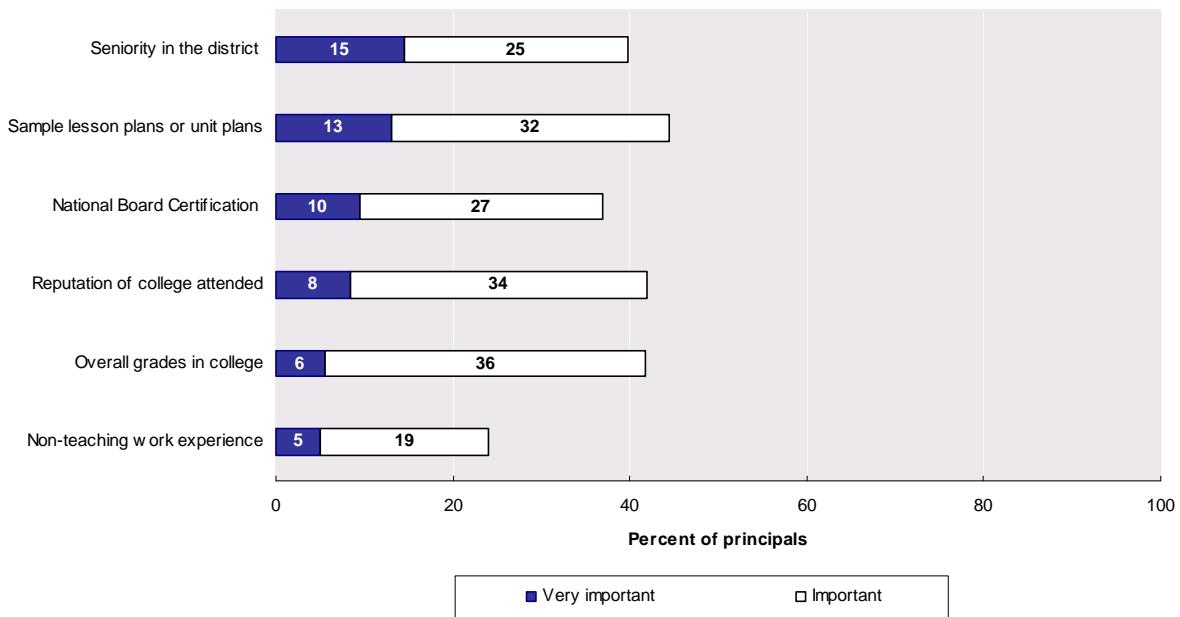
<sup>7</sup> 97% of principals reported that they consider teaching experience when making job offers. SE=0.92; n=293. Source: SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 7.

<sup>8</sup> 51% (SE=4.10; n=91) of principals in lower-performing schools (API 1-6) considered experience with their specific populations to be

very important, while 32% (SE=5.06; n=28) of principals in high-performing schools (API 7-10) felt the same. The difference between the lower-API and high-API schools was significant at the p<.01 level. Source: SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 7.

<sup>9</sup> SE=1.70; n=290. Source: SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 7.

**Exhibit 23**  
**Bottom Qualifications Reported as “Very Important” or “Important”**  
**When Making a Job Offer**



*See Appendix D for source and technical information.*

teaching position. The definition of fit varies across schools, however. It includes dispositions, such as valuing collaboration or having beliefs about student learning, that match the predominant views in the school. Principals and teachers both reported that they look for teachers who they believe have the attitudes, beliefs, and working style that will mesh with the priorities and culture of the school. As a district human resources staff member commented, “Every school community has its own school culture and needs,” and part of the challenge of hiring is finding a good teacher who can be strong both as practitioner and as member of the school community. In addition to dispositions, in some schools fit means being able to fill multiple roles, such as teaching math but also being able to coach the soccer team.

In contrast to credential status, teaching experience, and fit, survey data show that principals place less value on a candidate’s academic strength, though research has found an association between this characteristic and student achievement (e.g., Allen, 2003; Wayne & Youngs, 2003). Only half of principals<sup>10</sup> reported that they consider overall college

grades or the reputation of the college a candidate attended when making a job offer. Of those who consider these academic measures in hiring decisions, less than 10% feel they are very important (see Exhibit 23).

Likewise, in interviews, district administrators and school principals reported that they value pedagogical knowledge. Yet, few principals reported that they consider sample lesson plans or unit plans important or very important when making a job offer, even though these artifacts could provide insight into a prospective teacher’s instructional approaches and capacity. Only 45% of surveyed principals consider sample lesson or unit plans to be very important or important, with only 13% believing they are very important.

As elaborated in this section, administrators have articulated priorities for the characteristics they are looking for when hiring teachers, with certification, experience, and fit being valued most and other characteristics known to be associated with student achievement holding less priority. In the next section, we discuss the processes districts and schools use to measure the quality of teacher candidates.

*“...survey data show that principals place less value on a candidate’s academic strength, though research has found an association between this characteristic and student achievement.”*

<sup>10</sup> 51% (SE=3.10; n=292) of principals reported considering a candidate’s overall grades in college when making job offers. 48% (SE=3.13; n=290) of principals considered the reputation of the college a candidate attended when making job offers. Source: SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 7.

## MEASURING QUALITY OF CANDIDATES

*Districts and schools typically use a small number of processes to measure the quality of teacher candidates, and those processes provide limited information on a candidate's pedagogical skills and content knowledge.*

*“...interviews can provide poor measures of fit and of candidates' teaching skills.”*

The processes for hiring teachers typically include an initial screening and an interview. Although these processes may provide information on a candidate's certification status and interpersonal skills, we found that generally they provide limited information on pedagogical skills and content knowledge. Other processes, such as demonstration lessons, that do provide more insight into teaching abilities are used infrequently.

Typically, candidates must pass the initial paper screen before moving forward in the formal hiring process. The paper screen includes a review of documents required by a district, such as a resume, credential(s), credentialing test results, and a letter of intent. Information collected during the paper screen ensures that candidates meet minimum requirements and measures the most valued characteristic of candidates—credential status.

Interviews conducted by a school administrator or a panel composed of administrators and teachers are used to determine both a candidate's teaching experience and fit for the position—next to credential status, the other highest priorities principals consider

in hiring. Interviews are used in virtually all schools in the state, with 96% of principals<sup>11</sup> reporting that interviews are used during the hiring process. Despite their prevalence, however, interviews can provide poor measures of fit and of candidates' teaching skills.

Interviews typically are meant to provide insight into a candidate's personality, interpersonal skills, educational philosophy, and instructional strategies. Although interviews may be useful in providing face-to-face interaction, self-reports given in interviews provide limited information on candidates' overall pedagogical abilities. They do not provide evidence that candidates can fare well in the classroom since there is not necessarily a correlation between what candidates say to an interview panel and their abilities in the classroom. One principal, describing how she and her staff use interviews to select candidates, explained that they hold interviews so the current teaching staff “can feel how the candidate relates to them” but that after the interview “you just have to go on your gut feeling.” “I hate to say that,” she continued, “but it's how you do it.” Another principal reported, “The interview, by the way, is the worst way to select a candidate—by far the worst.” Contributing to the inadequacy of interviews is the considerable variation in the quality and relevance of the questions that schools and districts ask (see Exhibit 24), making the interview an unreliable tool for measuring teaching quality.

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<sup>11</sup> SE=1.21; n=296. Source: SRI Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers; Question 4.

**Exhibit 24**  
**Sample Interview Questions**

General Topic	Question
Classroom management	<ul style="list-style-type: none"> <li>▪ What kind of behavior in a child pushes your buttons? How will you work with that student?</li> <li>▪ At the start of a school year, how do you establish a classroom management plan with your students?</li> </ul>
Teaching strategies	<ul style="list-style-type: none"> <li>▪ How can we provide choice to students on a regular basis?</li> <li>▪ How do you structure your class to achieve maximum benefit from teacher/student contact?</li> <li>▪ How do you accommodate individual differences in skill level? In learning level?</li> </ul>
Content-specific teaching strategies	<ul style="list-style-type: none"> <li>▪ A group of students is having trouble with two-digit addition. Explain the steps you would follow to re-teach the lesson.</li> </ul>
Collaboration	<ul style="list-style-type: none"> <li>▪ How do you handle conflict with other staff members?</li> </ul>
School community	<ul style="list-style-type: none"> <li>▪ If I were a parent, convince me why I would be valuable as a volunteer in your classroom.</li> </ul>
"Fit" with a school	<ul style="list-style-type: none"> <li>▪ What would be the ideal philosophy of a school for you?</li> <li>▪ How do you generate pride and unity with ALL the staff and students while enforcing rules and regulations?</li> </ul>
Personality	<ul style="list-style-type: none"> <li>▪ Do you like to have people like you?</li> <li>▪ Teachers fall on a continuum of independent to relying on others. Where do you fall on this continuum?</li> </ul>

*Questions were excerpted from school protocols or lists of suggested questions given to school-level hiring staff by district human resources departments at case study sites.*

In contrast to paper screens and interviews, other hiring processes, such as reference checks and demonstration lessons, reportedly provide better insight about candidates' teaching abilities, but they are used much less frequently. Several case study principals reported that reference checks are a crucial part of the hiring process, and in fact they prefer reference checks over interviews to collect information on a candidate's teaching ability and attitudes. These principals had developed working relationships with many area school and district administrators and trusted their assessments of a candidate's knowledge and skills. Many principals, however, do not use reference checks so extensively, perhaps because of a lack of collegial relationships among area school and district administrators.

Demonstration lessons can provide additional information about a candidate's approach to instruction and a candidate's comfort working with particular student populations. As one principal explained, "We also have teacher candidates teach a

mini-lesson because you can have someone ace an interview but have relatively [few] teaching skills." However, across the state, only 8% of principals<sup>12</sup> reported always or usually having candidates teach demonstration lessons as part of the hiring process.

Although not widely used, where demonstration lessons are utilized principals find them to be valuable tools for assessing candidates' skills. One school in a hard-to-staff, low-performing district has its candidates present a demonstration lesson to students while administrators observe. Following the demonstration, students are asked to give feedback about the lesson. School administrators reported that this process gives them a sense of how the potential teacher will interact with and be received by their specific student

"...where demonstration lessons are utilized principals find them to be valuable tools for assessing candidates' skills."

<sup>12</sup> SE for Always=1.26, Usually=1.33, Sometimes=2.49, Rarely=2.89, Never=3.21. n=272. Source: SRI Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers; Question 5.

*“...information sources used in the typical hiring process generally do not provide meaningful information on a candidate’s teaching quality.”*

population. In another district in which obtaining a teaching position is highly competitive, candidates go through a series of five interviews, starting at the school level and ending with the superintendent. During the process, the principal of the school works with each candidate to prepare a lesson to be taught to the superintendent and other school and district staff in the final interview. Because the lesson is conducted with adults and not children, it does not provide much information on how the candidate interacts with students; however, principals reported that working with the candidate to develop the lesson gives them an idea of the candidate’s pedagogical thinking.

Administrators in two case study districts also talked about their efforts to measure the skills of future candidates by viewing their student teachers and teachers on temporary contracts as potential future hires. For these candidates, administrators are in a position to observe authentic teaching practice and to witness the ways in which these individuals work with their colleagues and fit into the school culture. School administrators reported making a special effort to observe these potential future hires in their classrooms

### **Innovative Hiring Strategy**

One case study district consistently has a large number of qualified applicants for its open positions and receives about 1,100 applications for 30 to 35 multiple-subject positions each year. Principals within the district heavily rely on word-of-mouth recruiting and often ask current teachers to recommend potential candidates. Beyond having a significant number of applicants and drawing on personal referrals, the district’s strongest pool of potential teachers is drawn strategically from temporary contract, long-term substitute, and student teacher positions. The district hires approximately three-quarters of its temporary contract teachers every year, making the majority of new hires those who entered the district through a temporary contract. This hiring strategy allows the district to “interview” and observe candidates teaching for an extended period, sometimes several years, before making the decision to hire them. As a result, district and school staff report being consistently satisfied with the teachers they hire.

and to speak with these teachers’ colleagues to gauge areas of strength and weakness. Information collected on these potential hires provides a more complete picture of the quality of the candidate’s knowledge and pedagogical skills.

In addition to assessing student teachers, other information about teaching quality gathered during teacher preparation also could provide useful hiring data to districts and schools; however, such information is rarely made available to districts and schools and therefore is rarely used in making hiring decisions. District human resources officials reported that they lack the capacity to examine evidence of teaching quality from preparation programs. In fact, school principals are largely unaware of the new requirements for each teacher candidate to complete a Teaching Performance Assessment and generally feel unprepared to use the information it could provide in making hiring decisions.

As illustrated above, information sources used in the typical hiring process generally do not provide meaningful information on a candidate’s teaching quality. Processes outside of the typical hiring process can further restrict available candidate information. Hiring at job fairs, in particular, creates a situation in which minimal data are gathered about the candidates. Most of our case study districts recruit at job fairs, at which administrators can both meet and screen applicants. District and school administrators reported that job fairs enable them to “be out front and get the best candidates.” Candidates bring their paper files for review (e.g., copies of credentials, transcripts, letters of recommendation) and may be offered a 20- to 30-minute interview. Some districts offer early contracts on-the-spot at job fairs, especially in historically hard-to-staff positions (e.g., science, special education). However, administrators are basing their hiring decisions on very limited information about the candidates. There is no opportunity for demonstration teaching, and the interviews are short and tend to be conducted by one or two district representatives instead of the principal and teachers, who are more aware of their school and staffing needs.

In summary, districts and schools typically measure the quality of candidates through a hiring process that includes a paper screen and an interview, though these processes provide limited information on teaching quality. Additional hiring processes, such as reference checks and demonstration lessons, are less common; however, these processes can provide rich information on a candidate’s knowledge, pedagogical skills, and potential fit. Variations in the size of the candidate pool may influence districts’ and schools’ decisions about whether or not to use these additional hiring processes, as described next.

## USE OF MEASURES IN HIRING

*The size and quality of the candidate pool determine the extent to which districts and schools employ multiple processes for assessing candidates or consider data on candidates' teaching quality. Low-performing, high-poverty, high-minority schools do not have sufficient applicant pools and tend not to use multiple measures of candidates. Low-performing schools are less able than high-performing schools to find candidates who meet their needs. In both low- and high-performing schools, when hiring is done just before the school year begins, the applicant pool is typically smaller, limiting schools' incentives to use information on candidates' teaching quality.*

As discussed above, schools and districts generally gather limited data on teaching quality through the hiring process. When there are few qualified applicants, as is the case in many low-performing, high-poverty, high-minority schools, districts and schools do not have the luxury of being selective and thus have no incentive to screen for quality.

### Hiring in Low-Performing Schools

Despite the use of strategic recruitment tools, low-performing schools tend to have inadequate applicant pools, in terms of both number and quality of applicants. A low-performing, hard-to-staff case study district, for example, employs strategic recruitment efforts such as attending local university career fairs, hosting its own job fair, and hosting student teachers with the intent of hiring out of their student teacher pool. Despite these efforts, the district has a dearth of applicants for teaching positions; in the 2006-07 school year, this district had only 90 applicants for 130 open positions.

When districts such as this one are faced with an insufficient applicant pool, measuring teaching quality becomes less meaningful. Districts and schools have little choice but to hire any applicant with the appropriate credentials. Sometimes these districts hire teachers without credentials and work to enroll them in an appropriate intern program. Information that would normally act as a screening device, such as

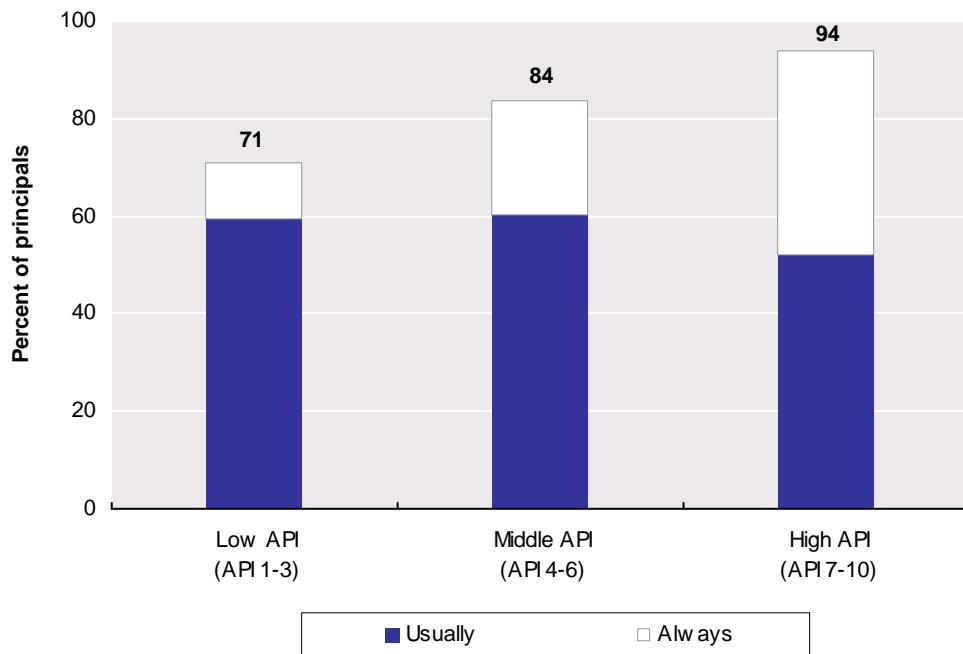
credential status, becomes the deciding qualification when schools are left with very few valid options. In these circumstances, hiring processes beyond the initial screening, such as interviews, if they occur at all, are pro forma.

With smaller applicant pools and limited hiring choices, hard-to-staff schools receive applications from candidates who often lack qualities valued by schools, such as teaching experience. As one principal commented, "Our school is a Program Improvement 5 School and is in a poverty [urban area]. Therefore, it does not attract experienced teachers." Another principal reported that "Well-qualified candidates [are] rarely available." Reflecting the small pools of qualified applicants, principals in low-performing schools were less likely than principals in higher-performing schools to report that they were able to hire teachers who were fully prepared to meet their students' needs. Nearly all principals (94%) in high-API schools reported that they usually or always were able to hire teachers who were fully prepared to meet their students' needs, compared with 84% of principals in mid-API schools and 71% of principals in low-API schools (see Exhibit 25).

Without increasing the applicant pool for these schools, hiring processes designed to identify high-quality applicants become irrelevant. To increase their applicant pools, some districts provide incentives to recruit teachers. Many incentives are geared toward hard-to-staff positions, though, rather than hard-to-staff schools. Two urban districts, for example, offer year-for-year credit on the salary schedule to attract teachers in high-need subject areas. More common is a signing bonus for special education, mathematics, or science teachers. These incentives may increase the pool of candidates for particular positions and the chance that such candidates accept job offers. Low-performing schools need major incentives such as these to attract a larger applicant pool.

*"Despite the use of strategic recruitment tools, low-performing schools tend to have inadequate applicant pools, both in terms of number and quality of applicants."*

**Exhibit 25**  
**Principals Who Report That They Are “Usually” or “Always” Able to Hire Teachers Who Are Fully Prepared to Meet Their Students’ Needs**



*See Appendix D for source and technical information.*

### **Hiring Late in the Summer**

Though low-performing schools continually face small and low-quality applicant pools, both low- and high-performing schools face these challenges when they hire teachers just before—or even after—school begins. And, when drawing from a smaller applicant pool, schools limit their use of information on candidates’ teaching abilities.

The later the hiring process begins, the more difficult it is to hire strong candidates because many of the strongest candidates already have been hired elsewhere. As one principal reported, “At times we have not been able to hold interviews at the beginning of the summer, and as a result had less qualified candidates to choose from.” A high school teacher in a district that suffers from late hiring commented, “We don’t recruit the ‘all stars’ that are in the district as student teachers. The newer, growing districts snap all those teachers away. Much of what we’re hiring are the last-choice people.”

Late hiring can be caused by many factors, including last-minute enrollment surges, slow hiring processes, and late notification from departing teachers. Another reason for late hiring cited across the case study districts is local transfer policies. On average, principals reported that transfers filled about one in three of their vacancies in the 2006-07 school year,<sup>13</sup> showing that transfers play a significant role in staffing some schools. Though the precise mechanisms and transfer requirements vary with local collective bargaining agreements, late transfers open up new positions that then have to be filled. In these circumstances, hiring from outside of the district begins quite late, leaving principals with fewer candidates from which to choose.

<sup>13</sup> The mean of 0.30 was created by dividing the number of vacancies filled by teacher transfers by the total number of teaching vacancies in 2006-07. SE=0.03; n=221. Source: SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Questions 6 & 6a.

In one case study district, declining enrollment has led to school closures, with laid-off teachers given first priority in filling vacancies, followed by voluntary transfers. By the time principals were allowed to fill open positions, it was late summer and they reported being left with a smaller pool of candidates.

The transfer process not only has a potential impact on late hiring, it can also restrict the discretion of school administrators or hiring committees in making hiring decisions. The voluntary transfer process often allows schools to consider teacher qualifications and to interview teachers. In the involuntary transfer process, principals rarely have the option of whom to hire. There are exceptions, however. Some bargaining agreements specifically give principals the right to refuse a transfer. Further, under SB 1655 (2006, Scott), low-API schools have the right to reject transfers. Case study data showed that many low-API schools were unaware of this right.

Whether due to an inefficient human resources department, declining enrollments, or transfer policies, late hiring makes it more difficult to assess the teaching quality of those candidates still in the applicant pool. Demonstration lessons with students, for example, though possible, are logically harder to

do for positions filled over the summer. As one principal described, “Our district posts vacancies too late in the school year to observe teachers in their own classroom. Demo lessons to a group of adults is not the same as observing candidates interact with students.” Like the need to provide incentives to recruit applicants to low-performing schools, there is a need to create mechanisms to hire early enough to maintain an adequately sized applicant pool.

## **CONCLUSION**

As a whole, districts and schools typically use limited information on a candidate’s teaching quality when making hiring decisions. In general, schools and districts focus on paper qualifications (e.g., credential status) and perceptions from interviews. Much less attention is paid to data related to how well a candidate can teach or what subject matter knowledge he or she possesses. Low-performing, high-poverty, high-minority schools lack an adequate pool of qualified teachers, as do many schools that hire late in the summer. With a smaller applicant pool, schools have little incentive to consider data about teaching quality when hiring.



## CHAPTER 5

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# TEACHER EVALUATION

As is the case during teacher preparation and hiring, there are multiple processes in place to measure teaching quality when individuals become classroom teachers. All full-time, permanent teachers are evaluated periodically through a formal performance review process. In addition, there are specialized programs that measure teaching quality along a teacher's career. Novice teachers participate in a formative assessment as part of their induction program, teachers who receive unsatisfactory ratings in their performance review may be evaluated further through the Peer Assistance and Review (PAR) Program, and accomplished teachers can volunteer to be assessed through the National Board Certification process. Each of these processes presents an important opportunity to measure and support teaching quality. Yet, most do not measure and support teaching quality well. We found that the most widely used teacher assessment processes in place rely on procedures that call into question the quality of the data collected. Also, although some schools and districts have adopted additional processes and procedures that address these shortcomings, assessment of teaching quality does not systematically inform the provision of support to teachers.

### Key Findings:

- Performance reviews, which rely heavily on observations of teachers, do not measure teaching quality well, nor are they used to determine teachers' professional development needs or to set professional goals.

- Statewide programs to measure the teaching quality of novice teachers, teachers with unsatisfactory performance reviews, and accomplished teachers either fail to link measurement and support or are used infrequently. The two programs in place to measure the teaching quality of novice teachers, the Beginning Teacher Support and Assessment program and teacher performance reviews, work independently of each other rather than informing one another to best support new teachers. The state's program to support and evaluate teachers with unsatisfactory performance reviews (PAR) is largely underutilized. National Board Certification is a highly regarded process for evaluating the teaching quality of accomplished, experienced teachers but is undertaken by few teachers.
- Local processes in which whole faculties or groups of teachers assess teaching practices together for the purposes of school reform are valued highly and feed directly into improving practice.

In this chapter, we discuss the various processes used to measure teaching quality, the types of data that are collected through the various processes, and the extent to which these data are used to inform the provision of support to teachers. First, we analyze the processes, focus, and uses for the formal performance reviews required of teachers across the state. Then, we analyze additional teacher assessments used for novice teachers, teachers who receive unsatisfactory performance reviews, and accomplished teachers. We also look at processes that measure teaching quality across schools. Last, we present general conclusions about the disjointed nature of the various assessment processes.

*“...because of inadequate processes, limited focus, and variations in implementation, performance reviews do not measure teaching quality well.”*

## STATEWIDE PROCESS TO EVALUATE TEACHERS: PERFORMANCE REVIEWS

*Performance reviews, which rely heavily on observations of teachers, do not measure teaching quality well, nor are they used to determine teachers' professional development needs or to set professional goals.*

The California Education Code requires that all full-time certificated personnel be formally evaluated, based, at least in part, on the California Standards for the Teaching Profession and/or the NBPTS standards. We use the term *performance review* to refer to this formal, mandated process.

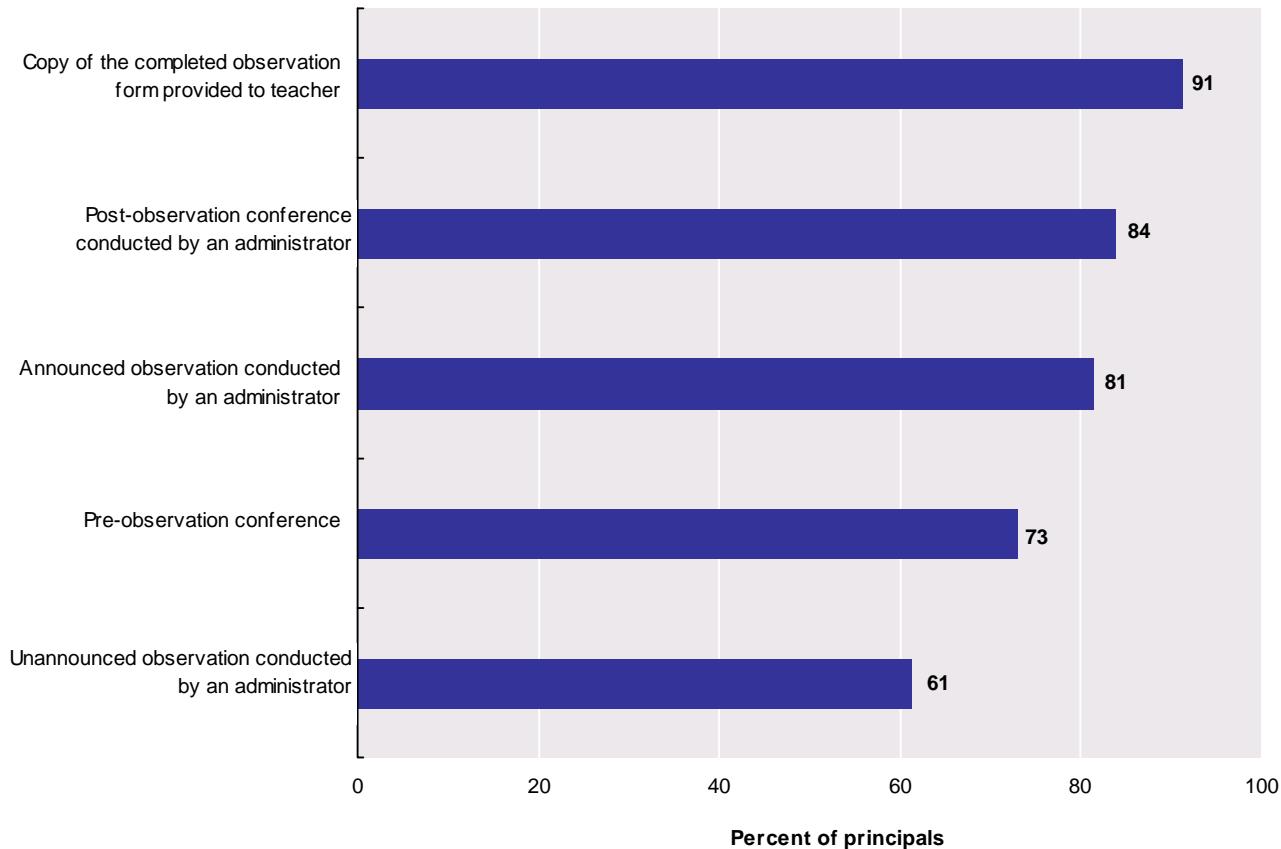
### Quality of Performance Reviews

Because they are mandated by law, performance reviews represent the one evaluation mechanism that is used universally across the state to measure teaching quality. However, because of inadequate

processes, limited focus, and variations in implementation, performance reviews do not measure teaching quality well.

Across the state, a typical performance review entails three steps, all revolving around a classroom observation. First, the evaluating administrator and teacher have a pre-observation conference at which the teacher discusses the goals and background of the lesson to be observed. Second, the administrator observes the teacher at the predetermined time and completes an evaluation form. Finally, within a few days of the observation, the administrator and teacher hold a post-observation conference to discuss the observation and the evaluation form. These activities represent the most prevalent evaluation processes across the state: 73% hold a pre-observation conference, 81% conduct announced observations, 84% conduct a post-observation conference, and 91% of principals report that they provide the teacher with a copy of the completed observation form (see Exhibit 26).

**Exhibit 26**  
**Evaluation Processes Used with “All” or “Almost All” Teachers**



*See Appendix D for source and technical information.*

Despite their widespread use, however, administrators and teachers are wary of the quality of data collected during performance reviews, in large part because of the heavy reliance on the announced classroom observation. They questioned whether teaching performance could really be measured when it is evaluated during an observation for which the teacher prepares. Teachers and administrators alike characterized these announced observations as “dog and pony shows” rather than an observation of a teacher’s typical practice. One administrator reported:

*I could look at teachers teaching a well-planned lesson just for me, and that’s not what I want. I want to know what they are doing with their colleagues in their grade level. I also want to see them when they don’t know when I’m coming through. I want to see how they are doing when they are not expecting me.*

In addition to describing the announced observations as rehearsed, teachers and administrators reported that the frequency and duration of observations did not provide administrators with sufficient opportunities to evaluate performance. In many districts, teachers are observed only once during the performance review year. A single observation, teachers and administrators reported, did not allow for administrators to see the range of instructional approaches and classroom behaviors that comprise a teacher’s practice. Also, the one observation may not be representative of a teacher’s practice—it may be an outlier of exceptionally strong or exceptionally weak teaching practice that is not typical for the teacher.

Though the exception, some districts have adopted processes to strengthen the performance review. In one case study district, for example, veteran teachers are observed multiple times during the performance evaluation year: once for 30 to 45 minutes and four times for 20 minutes. Another district has supplemented the formal observation. In response to the concern about the inadequacy of observations, this district is incorporating walk-throughs in which administrators will be making shorter but more frequent unannounced visits to classrooms. The walk-throughs will give administrators more opportunities to observe practice than the single announced observation.

Experienced teachers in some districts are given the opportunity to participate in an alternative performance review that can deviate considerably from the observation-oriented process. The types of activities undertaken as part of an alternative evaluation model vary significantly across schools, and, depending on how they are designed, they can provide better data about a teacher’s practice than the typical observation, or they can be even less informative. In one case study district, for example, veteran teachers worked with other teachers in their grade level or department on a goal chosen by the teachers. Each teacher was evaluated on the basis of progress toward meeting the established goal.

### Alternative Evaluation

In a school in one case study district, teachers and the school administrator chose to focus the alternative evaluation on writing instruction. They designed a process in which the teachers and administrators read selected books and articles about writing instruction and met to discuss how to use these strategies in their classrooms. Teachers then implemented new writing lessons and invited the other teachers in the group to observe. These teachers discussed successes and challenges in subsequent meetings throughout the year. In these cases, the alternative performance reviews provided veteran teachers with an opportunity to participate in a meaningful evaluation experience that eliminated problems with the announced visit.

In contrast, in one case study school, a school administrator approved an alternative performance evaluation that entailed a teacher’s setting up a schoolwide fair at which students learned about different advanced placement courses offered at the school. Although the teacher gained the experience of coordinating a schoolwide event, this performance review did not provide any opportunity to evaluate the teacher’s practice.

*“...administrators prioritize teaching practices nearly to the exclusion of student outcomes.”*

In addition to the limitations of the processes used in performance reviews, the narrow focus of performance reviews also restrict their potential benefits. The California Education Code (Section 44662) mandates that assessment of teacher performance be based on the following components:

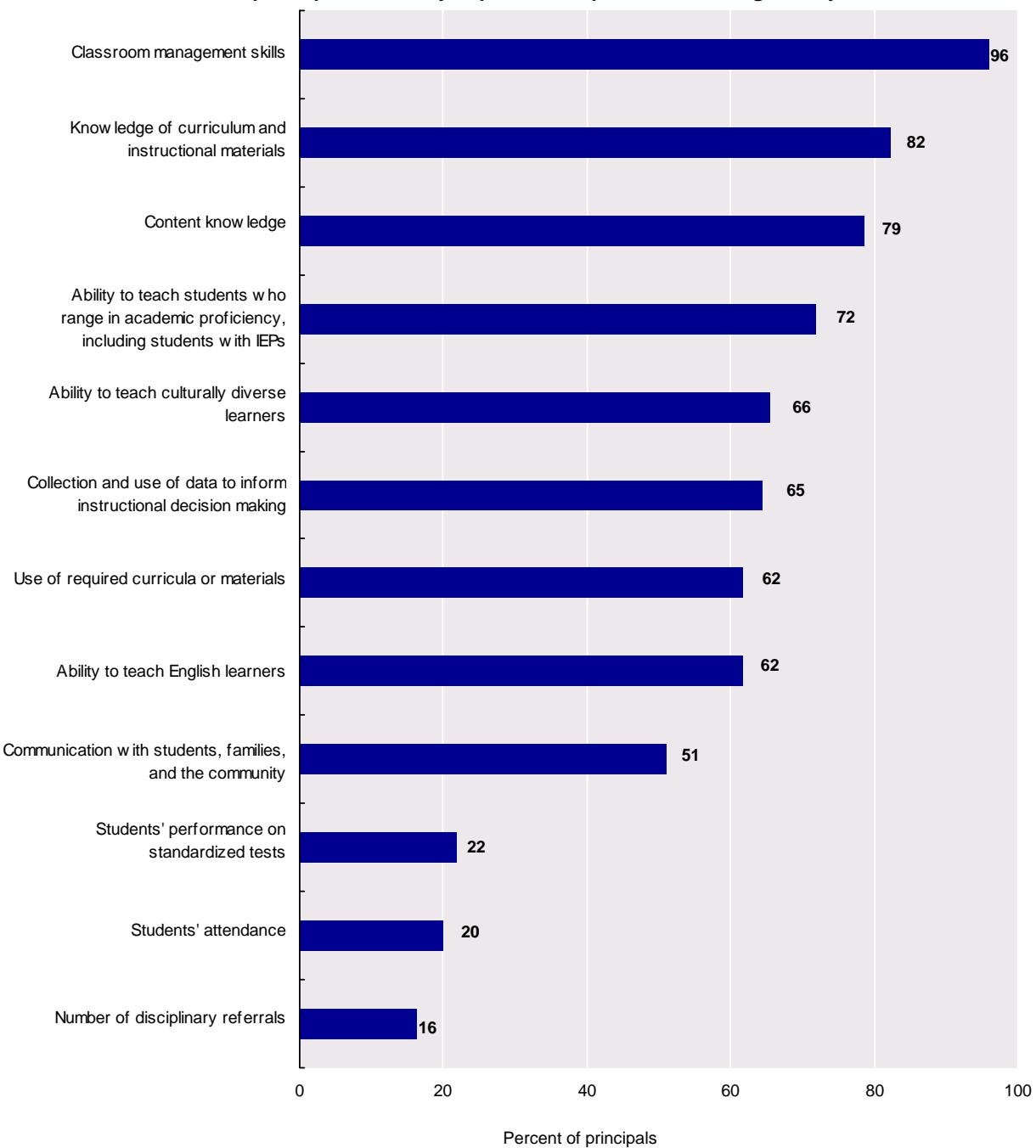
- (1) Pupil progress toward standards<sup>14</sup>
- (2) Instructional techniques and strategies used
- (3) Adherence to curricular objectives
- (4) The establishment and maintenance of a suitable learning environment
- (5) Results of participation in the Peer Assistance and Review Program for teachers.

Despite these regulations, which suggest a broad focus for performance reviews, administrators prioritize teaching practices nearly to the exclusion of student outcomes. When asked about the importance of various areas of knowledge and skills, 96% of surveyed school administrators reported that classroom management skills were very important in the evaluation of teaching quality. The majority of administrators also identified knowledge of curriculum and instructional materials (82%); content knowledge (79%); and ability to teach students who range in academic proficiency, including students with individualized education programs, as very important. In contrast, less than a quarter of surveyed school administrators identified student outcomes, such as student performance on standardized tests or students' attendance, as very important in their evaluation of teaching quality (see Exhibit 27).

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<sup>14</sup> Standards refer to district-established standards of pupil achievement at each grade level in each area of study and, if applicable, state-adopted academic content standards as measured by state-adopted criterion-referenced assessments. [Ed Code 44662 (a) and (b)(1)].

**Exhibit 27**  
**Principal Reports of “Very Important” Aspects of Teaching Quality**



*See Appendix D for source and technical information.*

*“For all the reasons discussed—poor data from observations, narrow measures, and uneven implementation—administrators and teachers expressed misgivings about the performance review process.”*

As discussed, the reliance on observations and the narrow focus of performance reviews can limit their efficacy in measuring teaching quality. One other factor also comes into play—variations in implementation at the school site. Despite district policies, school administrators tailor performance review processes as they see fit, sometimes eliminating some steps in the review process. For example, administrators from three different case study districts reported that they do not conduct pre-observation conferences. In one case, the administrator feels that the pre-observation conference influences teachers to prepare for the observation in a way that is different from their everyday instructional planning. The other two administrators reported that, because of their schools’ makeup of primarily veteran staff, they did not need to go through a pre-observation conference exercise. In addition, although performance review policies in our case study districts stated that all new teachers were to be evaluated each year for 2 years, new teachers in two urban districts reported that, by May, they had yet to go through performance reviews.

For all the reasons discussed—poor data from observations, narrow measures, and uneven implementation—administrators and teachers expressed misgivings about the performance review process. The inadequacies they expressed become manifest in the small number of teachers who receive unsatisfactory evaluations. District and school administrators reported that there are many more struggling teachers than the results of performance reviews would suggest. On the survey, school administrators reported that, on average, one teacher

had received or would be likely to receive an unsatisfactory evaluation during the 2006-07 school year.<sup>15</sup> School and district administrators in four of the seven case study districts reported that very few teachers receive unsatisfactory evaluations, compared with the number of struggling teachers, and no case study district reported having more than six unsatisfactory evaluations districtwide in a typical year.

As elaborated in this section, performance reviews do a poor job of measuring teaching quality and consequently do a poor job of identifying struggling teachers. Further raising questions about their value, performance review data are rarely used to support teachers, as described next.

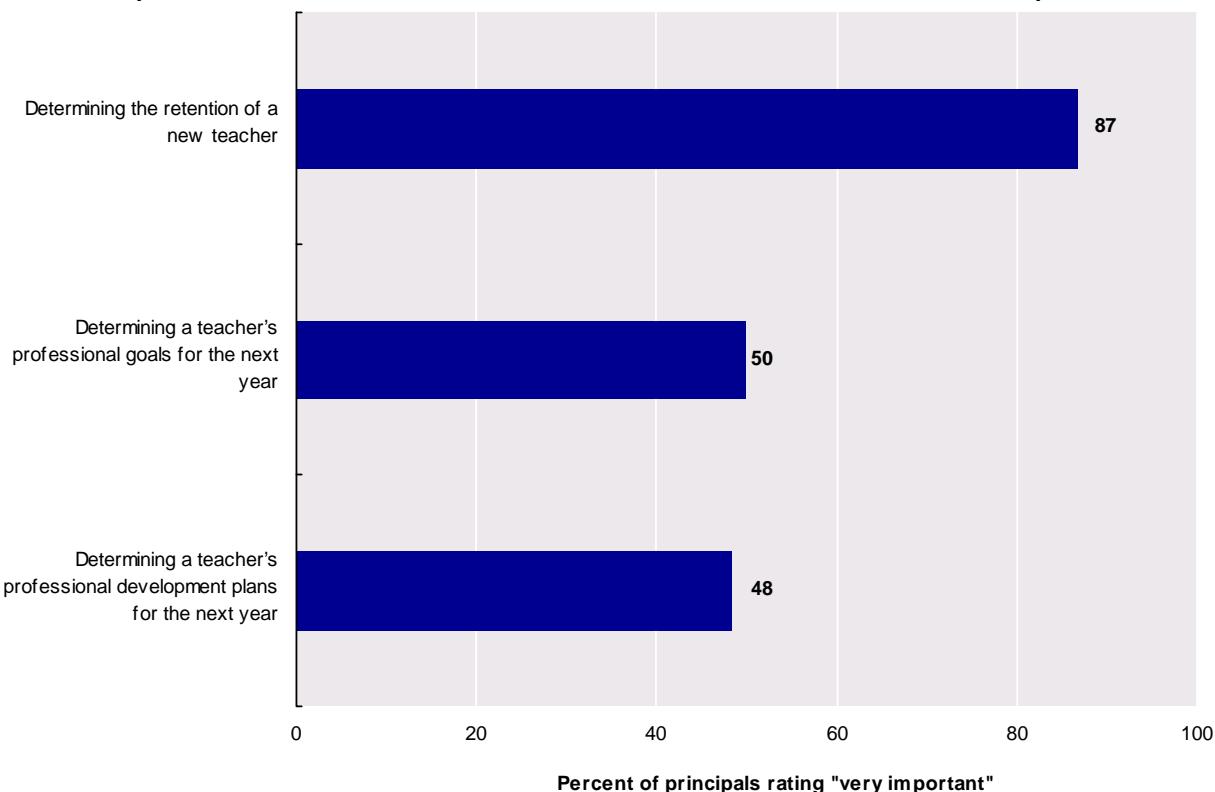
### **Uses of Performance Review Data**

Though all districts have established performance review processes and all teachers undergo periodic performance reviews throughout their careers, district and school personnel use them in a very limited way. For new teachers, the primary use of review data is to document teacher performance and to make employment decisions based on performance. Both survey and case study data showed that school administrators use performance review data to inform employment decisions for new, probationary teachers, since during the 2-year probationary period, districts may discontinue employment without going through a formal dismissal process. Eighty-seven percent of surveyed school administrators reported that they use performance review data to make high-stakes decisions to retain or dismiss a new teacher (see Exhibit 28).

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<sup>15</sup> Mean=0.9; SE=0.07; n=296. Source: SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 14.

**Exhibit 28**  
**Importance of Formal Performance Review on Retention and Professional Development**



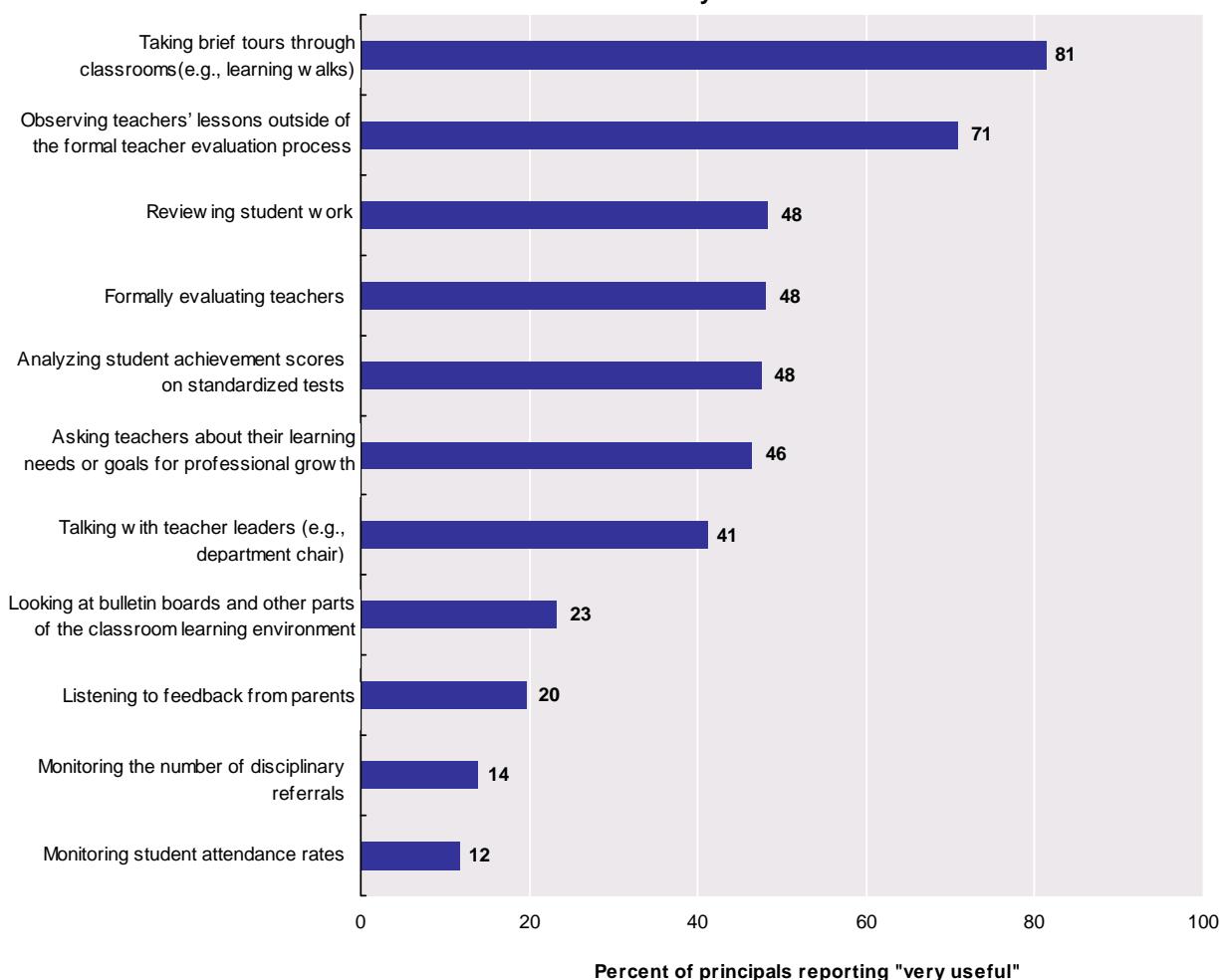
*See Appendix D for source and technical information.*

Once a teacher completes the 2-year probationary period, however, performance reviews in general become more pro forma, except in cases of extreme unsatisfactory performance (see later discussion on the PAR Program). Performance reviews for permanent teachers who receive satisfactory evaluations are more of a recordkeeping process than one that is tied to improving teaching practice. Only half of the surveyed school administrators reported that the formal evaluation was very important in determining a teacher's professional goals or professional development plans for the next year (50% and 48%, respectively; see Exhibit 28). Likewise, when we asked experienced teachers whether the results of the performance review were used in subsequent years to improve practice, several teachers responded that they had received positive performance reviews, so they did not have any specific areas to work on in subsequent years.

In contrast, there are schools and districts that deliberately use the performance review process to improve teaching practice. For example, a high school assistant principal in one case study school reported that she asks teachers during the post-observation conference to set goals based on the results of the performance review. When the assistant principal later conducts observations, she checks on progress toward these goals.

Given that schools rarely use performance review data to inform teachers' professional development plans, what data do administrators use to identify teachers' needs? School administrators reported that they rely on data from evaluation mechanisms outside of the performance review process to identify teachers' needs (see Exhibit 29). When asked how useful different types of data collection practices were in identifying teachers' needs, 81% of school administrators identified taking brief tours through classrooms as useful, and 71% cited observing teachers' lessons

**Exhibit 29**  
**Usefulness of Practices to Identify Teachers' Needs**



See Appendix D for source and technical information.

outside of the formal teacher evaluation process. Less than half (48%) identified formally evaluating teachers, analyzing student achievement data, or reviewing student work very useful when identifying teacher needs.

Clearly, administrators find mechanisms other than the performance review more useful in identifying teachers' needs. In the next section, we explore some of these other mechanisms used throughout the state or established in local districts and schools.

## STATEWIDE PROGRAMS TO ASSESS TEACHING QUALITY

*Statewide programs to measure the teaching quality of novice teachers, teachers with unsatisfactory performance reviews, and accomplished teachers either fail to link measurement and support or are used infrequently. The two programs in place to measure the teaching quality of novice teachers, the Beginning Teacher Support and Assessment program and teacher performance reviews, work independently of each other rather than informing one another to best support new teachers. The state's program to support and assess teachers with unsatisfactory performance reviews—Peer Assistance and Review—is largely underutilized. National Board Certification is a highly regarded process for assessing the teaching quality of accomplished, experienced teachers but is undertaken by few teachers.*

Performance reviews reflect only one type of teacher assessment. The state of California has put additional emphasis on measuring the teaching quality of specific teacher subgroups, including novice teachers; teachers who receive unsatisfactory evaluations; and accomplished, experienced teachers, through the support of statewide programs. We find that although the intent of these programs is to integrate the process of measuring teaching quality with the process of identifying and supporting teachers' instructional needs, variation in the implementation of these programs or very low participation in the programs restricts the potential linkages between measurement and support.

### **Novice Teachers**

The state of California supports the largest new teacher induction program in the nation, the Beginning Teacher Support and Assessment (BTSA) program. In 2005-06, there were more than 24,000 BTSA participants statewide (BTSA, 2007), and the state allocated \$128,671,000 to the program (Budget Act of 2007, 2007). The goal of BTSA is to provide "assessment, individualized support and advanced content for newly-credentialed, beginning teachers" (BTSA, 2007). Note that interns and other underprepared teachers are not eligible for BTSA; the induction program is funded only for teachers who have a preliminary or professional clear credential.

A cornerstone of BTSA is formative assessment. As part of the program, newly credentialed teachers are assigned a trained mentor, called a support provider, and complete a structured formative assessment, such as the California Formative Assessment and Support System for Teachers (CFASST). CFASST was designed to provide participating teachers with opportunities to work with their support providers to collect and analyze evidence of teaching performance, reflect on their teaching, and identify professional development opportunities to meet individual needs.

There are examples of innovative practices to measure and support the teaching quality of new teachers. However, case study data revealed that the multifaceted goals of the formative assessment system are not always realized in practice. Although all BTSA participants are required to participate in the formative assessment, there is a great deal of variation in the extent to which new teachers engage with the CFASST materials and how much support providers assist new teachers. For example, in one urban district, support providers were not clear about the frequency with which they were to meet with their new teachers; as a result, support ranged from meeting daily to meeting once every 2 weeks. And even some support providers who were clear about the district's policy reported that they were not able to meet regularly because of competing demands on their time. With such variation in the frequency of support provided, new teachers did not always have the opportunity to work through all the CFASST tasks with their support providers. To address this issue, the district provides new teachers with one full release day to work on the completion of CFASST tasks. This full release day arrangement changes the intent of CFASST from an ongoing, formative assessment of teaching practice to an exercise of completing required tasks.

In 2007-08, BTSA is piloting a new formative assessment, the Formative Assessment for California Teachers (FACT), which will replace CFASST. FACT was developed to address concerns that CFASST did not reflect the knowledge and skills new teachers now have as a result of revised SB 2042 teacher preparation programs. Its goal is to provide customized support based on individual needs identified through the TPA, new-teacher self-assessments, and support provider observations. More customized new-teacher support is a welcome improvement to BTSA; however, it is not clear how FACT will address the problems that arise from variation in the support new teachers receive.

### New-Teacher Support

In one case study district, full-time release teachers, known as consultants, observe and evaluate first-year teachers. Program requirements dictate that consultants have a minimum of 20 hours of contact time with new teachers in each of the two evaluation periods (fall and spring). Most consultants visit their assigned new teachers weekly to discuss lessons, conduct informal observations, and leave suggestions for the teacher in a journal. From their observations, consultants assist each new teacher in identifying professional goals and developing an individual induction plan. Every six weeks during the year, consultants report on the progress of the new teachers to a governance board comprised of three union- and two district-appointed members. At the end of the first year, consultants recommend new teachers either for continued employment or non-renewal, and a four-person majority from the governance board is required for all decisions. During a new teacher's second year, a school administrator assumes the role as evaluator but the consultant continues to support second-year teachers.

*"Though PAR establishes specialized evaluation and support for teachers, it appears that the reach of the program is quite limited."*

In addition to uneven implementation, changes in certification requirements have muddled the purpose of BTSA's assessment system. Certified completion of a BTSA program is now used to meet one of the requirements for obtaining a professional clear teaching credential. With the completion of a BTSA program, the "preferred pathway to a California Professional (Clear) Teaching Credential,"<sup>16</sup> CFASST is no longer strictly a formative assessment. The new credentialing requirement assumes that completion of BTSA is a summative assessment of teaching quality—that those who complete BTSA have the teaching skills worthy of the professional clear credential. However, the BTSA structure remains formative, and results are not shared with school administrators. Put another way, by law, new-teacher performance reviews and new-teacher formative assessments operate independently from one another. BTSA support providers may learn a lot about a new teacher's practice through classroom observations and conversations that take place as part of CFASST. However, any activity under BTSA is confidential and

does not inform a teacher's performance review. If a support provider sees a new teacher struggling, the support provider may not share that information with the principal. Rather than informing one another to best support new teachers, the performance reviews and formative assessments remain separate.

### Teachers with Unsatisfactory Evaluations

Like the emphasis placed on evaluating new teachers, California has established policies to increase the frequency of evaluations and the concomitant support provided to teachers who receive unsatisfactory performance review ratings. In 1999, California established the California Peer Assistance and Review (PAR) Program, "to assist teachers whose bi-annual personnel reviews were not satisfactory" (CDE, 2007d). Teachers also may be referred to PAR or may request to participate in a PAR program. PAR programs are locally negotiated, so programs vary in processes and procedures; however, the goals of PAR programs are "to assist experienced teachers who need help developing subject matter knowledge, teaching strategies, or both" (CDE, 2007e). PAR teachers are provided mentors who are accomplished teachers selected by a PAR review board composed of district personnel and teachers. PAR mentors are to provide support in the areas identified as in need of improvement on the performance review. PAR mentors report to the PAR review board on the progress of participants, and the review board makes the final employment recommendations for participants.

Though PAR establishes specialized evaluation and support for teachers, it appears that the reach of the program is quite limited. No data are available on the number of teachers statewide who are participating in PAR programs because the state allocation is based on the total number of certificated teachers in a district rather than the number of teachers participating in PAR.<sup>17</sup> In the case study districts, though, very few teachers were participating in PAR programs since very few teachers receive an overall unsatisfactory performance review. The lack of participants drew criticism from a few administrators.

Even in the face of criticism regarding the lack of participants, some administrators view PAR as a viable

<sup>16</sup> California Beginning Teacher Support and Assessment Web site. *BTSA-Basics* ([http://www.btsa.ca.gov/BTSA\\_basics.html](http://www.btsa.ca.gov/BTSA_basics.html)).

<sup>17</sup> Funds not used for PAR can be used to support other professional development activities, including BTSA.

option for improving teaching practice. One case study district provides an example of a carefully crafted PAR program. Participating teachers work with a PAR mentor to create an improvement plan. The PAR mentor provides support ranging from instructional techniques and strategies to classroom management and creating a sustainable learning environment. The PAR mentor periodically reports progress to a governance board consisting of union and district representatives. The board reviews observations and evaluations, recommends supports, and approves a teacher's improvement plan. If a teacher receives a second unsatisfactory evaluation, the teacher continues to meet with the PAR mentor and a larger evaluation team is created. The evaluation team, which includes a site evaluator, a district administrator, and a third individual chosen by the board, collaborates on the final written evaluation for the teacher. If a teacher is unable to pass the second phase of intervention, the length of which can vary, the dismissal process begins.

### **Accomplished Teachers**

In addition to targeting additional evaluation and support for experienced teachers who receive unsatisfactory evaluations, California targets accomplished, experienced teachers by promoting National Board Certification. Experienced teachers may choose to have their practice assessed by applying for National Board Certification. NBPTS has established a rigorous process to assess teaching quality. Applicants for National Board Certification submit four portfolios to demonstrate accomplished teaching. Three portfolios are classroom based and include videotapes of the teacher and examples of student work. The fourth portfolio relates to the applicant's work outside of the classroom (e.g., with parents or colleagues) and how that work affects student learning. Applicants also must complete six subject-specific exercises to demonstrate content knowledge. Applications for certification are scored by a minimum of 12 peer teachers who have completed intensive training and are qualified to serve as scorers, based on their understanding of NBPTS standards and guidelines.

The validity of the National Board Certification process has been established by a number of research studies demonstrating positive effects of National Board Certification on teacher practice and student achievement. Both the state and local districts recognize the strength of National Board Certification in identifying high-quality teaching through the

investment of resources to support completion of the process and to award bonuses to teachers who receive certification.<sup>18</sup> Further, teachers who have gone through the process report that in and of itself it is a rewarding professional development experience. Despite the strengths inherent in the process, however, few teachers participate in the program, because of the financial costs and time commitments. According to the California Department of Education, there are 3,660 National Board Certified Teachers in the state, representing only 1% of all teachers (CDE, 2007f). Like PAR, this promising means to assess teaching quality is little used.

The state of California has established many opportunities to assess teaching quality. As discussed thus far, however, most have limitations due to faulty processes, problematic implementation, or insufficient reach. In the next section, we turn from state efforts to those of local schools and districts and discuss their efforts to establish alternative approaches to assessment that they find more valuable and easier to tie to teacher supports.

### **LOCAL EFFORTS TO ASSESS SCHOOLWIDE TEACHING PRACTICES**

*Local evaluation processes in which whole faculties or groups of teachers assess teaching practices together for the purposes of school reform are valued highly and feed directly into improving practice.*

With the imperative to increase student achievement, districts and schools are working hard to improve teaching practices. Throughout this chapter, we have discussed assessment practices that focus on individual teachers. Some districts and schools, however, are using assessment processes such as walk-throughs and teacher learning communities to evaluate teacher practices schoolwide, identify general weaknesses, and determine supports and activities to improve practice. These strategies, when they involve whole faculties or groups of teachers and when they are used for the purpose of whole-school improvement, are valued highly by both teachers and administrators.

Walk-throughs entail visiting many classrooms for short amounts of time. They may be focused on specific teaching practices, such as the use of inquiry

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<sup>18</sup> The state allocated \$6 million in 2007-08 to provide stipends to National Board Certified Teachers who teach in low-performing schools.

*“The development of professional learning communities changes the dynamic around measuring and assessing high-quality teaching from a process that is done to teachers to a process in which teachers are responsible for supporting high-quality teaching.”*

or hands-on instruction; they may be focused on the learning environment; or they may be looking more holistically at classrooms. Sometimes they are guided by structured protocols; sometimes they are more free form. However designed, nearly all administrators interviewed in the case study districts reported using walk-throughs to measure teaching quality.

Administrators and teachers reported that the walk-throughs and ensuing meetings provided valuable insight into teaching practices and resulted in very specific strategies to implement in the classroom. Note, however, that the walk-throughs in this example were collaborative, collegial endeavors that involved teachers and administrators. They were not processes used solely by principals to assess individual teachers or to circumvent appropriate standards-based performance reviews. When processes were focused on schoolwide instructional practices and not targeted at individuals, teachers were able to gain a good understanding of their own practice in relationship to their colleagues, and as a team they were able to identify areas to target for improvement. When done collectively, teachers feel they have the support of the entire school staff to develop their skills. There is a direct connection between this assessment process and teacher development.

In addition to walk-throughs, some districts and schools are establishing and supporting structured professional learning communities as a way to involve teachers in collectively examining and improving their practice. As an example, one middle school supports subject area professional learning communities by scheduling a common planning period each week. During this planning period, the entire subject area team meets to touch base on instructional matters, such as pacing and assessments, and share lesson plans. In addition to the subject area meetings, the faculty members as a whole have collaborative time to reflect on their practice and engage in staff development. On the first Wednesday of every month, a teacher or team of teachers presents on an instructional topic. The presenters not only discuss the strategy but model the practice on which they are presenting. Over the next few weeks, the rest of the faculty practice using the strategy in their own classrooms.

### The Walk-through

One middle school in our case study has established focused walk-throughs as a way to assess teaching practices in general. Walk-throughs are conducted four times per year and include classroom teachers, the instructional coach, and school administrators. Prior to the walk-through, school administrators select focus areas for observation and communicate those areas to all teachers, including those participating in the walk-through and those being observed. During a focus walk, all classrooms are observed. Following each walk-through, there is a full faculty meeting to discuss what was observed, classroom trends, and possible actions for improvement. The faculty reconvenes about a week later to discuss improvement strategies and action steps.

On the last Wednesday of the month, the departments meet, and each teacher is responsible for bringing artifacts from his or her classroom using the strategy. They also share their lesson plans and talk about the strengths and weaknesses of their lessons. All teachers are expected to participate in these meetings.

The development of professional learning communities changes the dynamic around measuring and assessing high-quality teaching from a process that is done to teachers to a process in which teachers are responsible for supporting high-quality teaching. Teachers reflect on their own practice, share successes and failures with their colleagues, and learn from one another.

In each of these schoolwide practices, evaluation is much more dynamic than in performance reviews. Examining practice is an ongoing activity, not a single observation. It is directly tied to teacher development, and improvement becomes a collaborative process. It is because of the ongoing and concrete nature of these practices that teachers and administrators hold them up as worthwhile processes.

## **CONCLUSION**

Much effort is being expended on measuring teaching quality throughout a teacher's career. Some of these processes apply to all teachers; others are targeted to novice teachers, teachers with unsatisfactory performance reviews, or exemplary teachers. However, not all assessment processes measure teaching quality well or are directly tied to teacher development. Schoolwide assessment practices, in contrast to individual assessments, tend to be more focused on improving practice.

Regardless, the processes to measure teaching quality (e.g., performance reviews, BTSA, PAR, National Board, walk-throughs, professional learning communities) do not work together in a coherent system with an end goal of strengthening practice and improving teaching quality. As a result, teacher assessment is disjointed; the processes for measuring teaching quality do not work together to support the efforts of teachers and administrators to improve teaching quality.



## CHAPTER 6

# CONCLUSIONS: MEASURING TEACHING QUALITY IN CALIFORNIA

To ensure that all students meet high academic standards, policymakers have redoubled their efforts to support and strengthen the state's teacher workforce. Ongoing efforts to prepare, induct, and retain fully prepared teachers have shown results. The number of underprepared teachers in the state has dropped about 42,000 to about 15,000 today. Still, an aging workforce and a drop in enrollment in teacher preparation programs are evidence that the state needs to retain a focus on the supply of fully prepared teachers.

For the past decade, beginning with the passage of SB 2042 (1998, Alpert), policymakers and practitioners have sought to make the state's loosely coupled teacher development programs into a coherent and coordinated system. Starting with the California Standards for the Teaching Profession, the goal has been to establish a relatively seamless system in which prospective, novice, and veteran teachers receive the same message about what constitutes high-quality practice.

Our examination of how teaching quality is measured throughout a teacher's career and how that information is used to strengthen practice shows that the state has a long way to go to realize the goal of a coherent system. In general, California's current set of teacher development programs does not comprise a system at all and fails to measure teaching quality rigorously or use what information it does collect to improve teaching quality.

Despite expensive efforts to measure teaching quality, current measurement tools used to credential, hire, and induct teachers, as well as improve the skills of veteran teachers are largely inadequate. Improving how teaching quality is measured at each stage of a teacher's career and using that information to improve teaching quality is a powerful way to enhance student learning.

But, as we examined each component of the teacher development continuum, we found only a few examples of exemplary practice.

In the case of teacher preparation, we found that information on teacher candidates' subject matter knowledge is largely ignored during their preparation. In addition, we found that assessment of student teaching relies on a largely untrained and poorly compensated cadre of experienced teachers. And, although the introduction of the teaching performance assessment beginning in 2008 holds promise for the rigorous assessment of teaching quality, pilot implementation has been problematic in places.

Hiring decisions rely on particularly weak data. Although districts and schools that serve high-performing students sometimes use rigorous methods for assessing the teaching quality of applicants, most ignore available information on candidates' skills and knowledge and instead rely on impressions gathered mainly through interviews.

The induction of new teachers has been based on a one-size-fits-all formative assessment, often experienced as overly burdensome and redundant. Further, induction suffers from uneven implementation and collects information on teaching quality that is not part of tenure decisions. Also, assessment of teacher performance rarely is based on rigorous data collection efforts, and the data collected are rarely used to improve teaching practice. Finally, although the National Board Certification process is considered a rigorous method for measuring teaching quality, only a small number of accomplished teachers have engaged in this certification process.

*“Perhaps even more troubling is the lack of information sharing across the components of the teacher development system. Information gathered during a teacher’s preparation generally is not used to inform hiring decisions or to plan an induction program. Data collected during induction and data collected*

*“Perhaps even more troubling is the lack of information sharing across the components of the teacher development system.”*

*"Rather than acting in isolation, all components of the teacher development continuum need to work together as a system..."*

during evaluations of novice teachers are not shared; the state is in the peculiar position of having credentialing and tenure procedures running on parallel but separate tracks. In addition, the evaluation of both novice and veteran teachers rarely informs professional development plans or is considered useful by teachers for strengthening their teaching.

This study has tried to shine a light on the inadequate system of measuring and using data for the purpose of strengthening teaching quality in California. Improving the ways in which California measures teaching quality and uses that information will require actions at all levels: by state policymakers, teacher preparation programs, districts, and schools. Rather than acting in isolation, all components of the teacher development continuum need to work together as a system, with common definitions of teaching quality and reliable measures that inform the types of support provided to teachers across the continuum.

Finally, the starting point for establishing a system of measuring teaching quality is to level the playing field. Until all schools have an equal chance to select high-quality teachers, teaching quality will be a moot issue for hard-to-staff schools. Until that point is reached, efforts to improve the way that California measures teaching quality and the uses of that information will not reduce the disparities that currently exist.

It is our belief that by improving the ways in which California measures teaching quality and uses that information to strengthen practice, the state will be able to advance student learning.

#### Recommendations of The Center for the Future of Teaching and Learning

On the basis of the findings in this report, deliberations with the cosponsors and Task Force members who guide this work, and years of experience working with state agencies and California policymakers, CFTL recommends the following to strengthen California's teaching force:

1. Review and align the current components of teacher development to form a *system* that is focused on strengthening teaching quality
2. Continue to develop the California Longitudinal Teacher Integrated Data Education System (CALTIDES) and use the data derived from the system to inform decisions about the ways in which the components of teacher development can be revised, aligned, and made into a system that learns, adapts, and evolves.
3. Regularly assess classroom practice and use the information gathered to strengthen teaching quality.
4. Encourage policies that will build and support a larger pool of prospective teachers.

For a more detailed discussion of the recommendations, see the Recommendations Supplement to the Status of the Teaching Profession 2007, available online at [www.cftl.org](http://www.cftl.org).

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## APPENDIX A

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# RESEARCH METHODS

This appendix details the design of and procedures for the major data collection methods and analyses used in this study. Specifically, we discuss the sampling, administration, and analysis of the survey; case study data collection; and secondary data analysis.

### STATEWIDE SURVEY

The survey of California principals was designed to provide a statewide picture of principals' practices in hiring, evaluating, and supporting teachers.

Principals were asked to report on a variety of topics, grouped into the following sections:

- Background
- Hiring Processes
- Evaluation of Teachers New to the District
- Evaluation of Tenured Teachers
- Teacher Evaluation in General
- Identifying Teachers' Needs
- Supporting Teachers

The study surveyed 600 schools, representative of public schools in the state. A response rate of 50% was achieved, with 296<sup>19</sup> principals or assistant principals responding to the survey.

### Sampling Procedures

The research team selected a stratified random sample of California public schools to participate in the survey portion of the study. The sampling plan was designed to provide a sufficiently large number of respondents to conduct analyses of, and make comparisons across, subgroups of schools. The sample was stratified by two variables—school level and Academic Performance Index (API) decile—as follows:

- **School level.** Based on school type data from California's Public Schools and Districts database, schools were organized into three categories: elementary (elementary school), middle (middle school or junior high school), and high (high school).
- **Academic Performance Index (API).** Schools identified in California's API Base data file with API deciles of 1 or 2 were combined to represent "low API" schools; schools in API deciles 3-6 were combined to represent "mid API" schools; and schools in API deciles 7-10 were combined to represent "high API" schools.

The study team restricted the school sample to schools identified as elementary, middle, junior high, or high in California's Public Schools and Districts database. The sample excluded less-traditional schools (e.g., alternative high schools, community day schools, charter schools) to allow a more focused analysis of the experiences of teachers within the most typical school settings in the state. Based on the sampling dimensions of interest, schools missing API information in the API Base data file were excluded.

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<sup>19</sup> Two schools in the sample were determined ineligible because of school closure. One school in the sample was determined ineligible because multiple people took on the role of principal throughout the school year, leaving the current principal unable to answer survey questions.

## **Instrument Development**

Researchers developed the survey instrument to address the study's topics of interest. The questionnaire asked respondents about hiring processes, teacher evaluation, and identifying and supporting teachers' needs. The study team drew on survey items developed for other surveys of principals around the country and developed its own survey items to address the study's specific questions. After creating the initial survey instrument, the research team piloted the survey with a small sample of school principals to gauge item clarity and time needed to complete the form. The team revised the survey instrument based on recommendations and feedback from pilot respondents to create the Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers.

## **Survey Administration**

The Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers questionnaire was administered<sup>20</sup> to the sample of 600 school administrators by mail and Internet from April through July 2007. Respondents were offered a \$25 gift certificate to amazon.com as an incentive for completing the survey. Prior to the first paper and online mailing, hard copy and electronic introduction letters were sent to the principals explaining the purpose of the study. Approximately 1 week after the introduction letters were received, the paper and online surveys were administered at the same time.

The online survey administration included a link to the online questionnaire; the paper mailing included a hard copy of the questionnaire and a postage-paid reply envelope. One week after the initial survey mailing, a reminder postcard was sent to principals including a Web address for the online survey. Two weeks after the reminder postcard was received, a second paper questionnaire was sent to all nonrespondents. Reminder e-mails were periodically sent to nonrespondents to encourage participation in the study until the survey administration ended in July 2007.

The survey team created a tracking system by assigning principals unique identifiers to link them to their school and stratification information. As surveys were returned, the response information was logged into the tracking system, enabling the research team to track response rates by school level and API level. Beginning in May, a member of the research team made efforts to even out the response rates across groups by conducting targeted phone follow-up to nonresponding principals in low-response cells. Exhibit A-1 displays the final response rates by school and API level.

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<sup>20</sup> The study team employed an outside vendor to administer the paper and online surveys, send follow-up e-mails and postcards, and mail gift certificates to survey respondents.

**Exhibit A-1**  
**Survey Response Rates, by School Level and API Level**

		Low-API	Mid-API	High-API	Total
Elementary	Number of schools in California	1,017	2,057	2,111	5,185
	Number of schools sampled	120	120	120	360
	Response rate of schools sampled	40%	53%*	51%*	48%
Middle	Number of schools in California	240	481	461	1,182
	Number of schools sampled	40	40	40	120
	Response rate of schools sampled	53%	55%	63%	57%
High	Number of schools in California	175	382	380	937
	Number of schools sampled	40	40	40	120
	Response rate of schools sampled	55%	43%	43%	47%
Total	Number of schools in California	1,432	2,920	2,952	7,304
	Number of schools sampled	200	200	200	600
	Response rate of schools sampled	46%	51%	52%	50%

\*Response rate calculated after ineligible schools were dropped from sample.

Note: School level used to stratify the sample is based on "school type" data from California's Public Schools and Districts Database. School levels were organized into three categories: elementary (elementary school), middle (middle school or junior high school), and high (high school). API level is based on the school's API decile ranking in California's API Base data file. Schools in API deciles 1 or 2 were combined to represent "low-API" schools; schools in API deciles 3-6 were combined to represent "mid-API" schools; schools in API deciles 7-10 were combined to represent "high-API" schools.

## Survey Analysis

Data from the paper surveys were scanned into a computer file with a subset hand-verified to ensure accuracy in the scanning process. Data from online surveys were collected via the Web host. Data from the paper survey and the online survey were merged to create one data file for analysis.

The study team weighted schools by strata based on the final stratum size (n) and the target population stratum size (N), as well as the total sample size (total n) and the total target population size (total N). The weight assigned to each stratum equals  $(N/n) * (Total n/Total N)$ . This weighting strategy makes the final sample representative of the target population in each stratum.

All survey analyses were conducted with the SAS statistical software package. The research team computed single summary statistics and examined response distributions for each item. Comparative

analyses were used to determine differences by school level and API level. Chi-square tests were used for categorical variables, and analysis of variance (ANOVA) tests were used for continuous variables. Reported contrasts between groups of schools are statistically significant.

## CASE STUDIES

To gain an understanding of measures of teaching quality throughout the teacher development system, the research team conducted in-depth case studies of 8 teacher preparation programs and 21 schools in 7 districts across California. While the survey offered a broad picture of principals' practices when hiring, evaluating, and supporting teachers, the case studies enabled researchers to investigate the use of data throughout a teacher's career from initial preparation to evaluation as tenured teachers.

## **Sample**

The research team visited seven districts in the state representing California's geographic diversity, including three districts in southern California, two districts in the Central Valley, one district in the Bay Area, and one district in north central California. Districts were also selected to represent a range of urbanicity, from districts in densely populated, urban areas to districts in smaller towns. District size also was considered. Student enrollment in our district sample ranged from a district serving slightly under 14,000 students to the largest district in our sample, serving more than 49,000 students. Once the districts were selected, a nested sample of teacher preparation programs was selected. The study team visited each of the three major teacher preparation systems within California: California State University (CSU), University of California (UC), and private institutions. The research team visited five CSUs, one UC campus, and two private institutions. Researchers focused primarily on single- and multiple-subject credential programs but also reviewed intern and blended programs where they existed. Because data collection among California teacher preparation programs included a focus on the recently mandated Teacher Performance Assessment (TPA), researchers visited programs in different phases of implementing this state mandate.

## **Protocol Development and Data Collection Procedures**

The research team visited teacher preparation programs and school districts across California. For university interviews, the study team created one protocol that addressed teacher preparation program mission, admissions, coursework, student teaching, induction support, relationship with local districts, and accreditation. Because university staffing structures vary considerably, researchers spoke to a range of people to answer questions contained in the protocol. At districts and schools, the study team created a tailored, semistructured interview protocol for each type of respondent in anticipation of the wide range of types and duties of interviewees. Exhibit A-2 summarizes the interview topics by type of district- or school-related case study respondent.

The study team contacted selected universities and districts to request access to interview university, district, and school staff. Researchers sent letters describing the study and followed up with phone calls to potential participants. Once permission was granted, teams of two researchers visited each university and affiliated district. The teams spent approximately 1 day at each school and university within the site, conducting interviews and collecting documents to learn about the different entities' use of teacher-related data. If individuals were unavailable to meet with researchers on-site, phone interviews were conducted to collect the necessary data.

**Exhibit A-2**  
**Interview Topics, by Type of District- or School-Related Case Study Respondent**

Interview Topic	District Staff	School Administrator	Experienced Teacher	New Teacher
District context	X			
School context		X		
Recruitment, hiring, and/or placement	X	X	X	X
Relationship with local teacher preparation programs	X	X		
Teacher evaluation	X	X	X	X
Teacher support	X	X	X	X
Retention	X			
State legislation	X			
Professional community		X	X	X

Most case study sites consisted of one teacher preparation program; a district local to the teacher preparation program; and one elementary, one middle, and one high school within the identified district. One case study site consisted of two private teacher preparation programs, one district, and three schools (elementary, middle, high) within the district. In each university, researchers interviewed the dean of the School of Education, faculty in charge of the multiple-subject credential program, faculty in charge of the English or math single-subject credential program, faculty in charge of student teaching, student teacher

supervisors, admissions officers, and the director of the credential office. In each district, researchers interviewed staff carrying out roles typically filled by the Superintendent, Assistant Superintendent, Director of Induction, Director of Professional Development, Human Resources director, and Peer Assistance Review director. In each school, researchers interviewed the principal and/or assistant principal, experienced teachers (e.g., department chair, induction support provider), and new teachers. Exhibit A-3 lists the types of interviewees who participated in the case studies.

**Exhibit A-3**  
**Case Study Interviewees**

Interviewee Role	Number of Interviewees
University staff member	60
District staff member	40
School administrator	24
Teacher	59
Other*	4
<b>Total number of interviewees</b>	<b>187</b>

*\*Includes union representatives and instructional coaches.*

### **Case Study Analysis**

Case study analysis began on-site in each university, district, and school. The case study teams met at the end of each data collection day to begin discussing emerging themes identified on-site. At the end of the site visit, team members completed a structured debriefing guide for each site. The debriefing guide was designed to capture university-, district-, and school-level variation among the sites and acted as a tool to synthesize the information gathered from interviewees.

After the research teams completed their site visits and debriefing guides, the complete study team reviewed findings across the sites and conducted cross-case analysis. A series of structured debriefing meetings were held, in which members of the research team analyzed and discussed case study data to identify cross-cutting themes, variation among sites, and the factors that relate to identified uniformity and variation.

### **INTEGRATED ANALYSIS**

Results of the principal survey analyses were compared with themes emerging from case study data. The survey data provided a statewide picture of principals' approaches to hiring, evaluating, and supporting teachers. The case study data provided in-depth examples to illustrate patterns found in the survey. Case study data also provided insight into the use of data in teacher development.

### **SECONDARY ANALYSIS**

The California Department of Education (CDE) conducts an annual collection of data on California's public schools, staff, and students. The research team used data provided through the California Basic Educational Data System (includes the Professional Assignment Information Form, List of California Public Schools and Districts, Course Data by Assignment, and SIF-Section B files), Free and Reduced Meals Program and CalWORKS data files, API Growth data file, and California High School Exit Exam Statewide Research File to conduct a series of analyses on the supply, demand, and distribution of teachers across the state.

The study team also used data provided by the California Commission on Teacher Credentialing, California State Teachers' Retirement System, and California Department of Finance to conduct additional analyses.

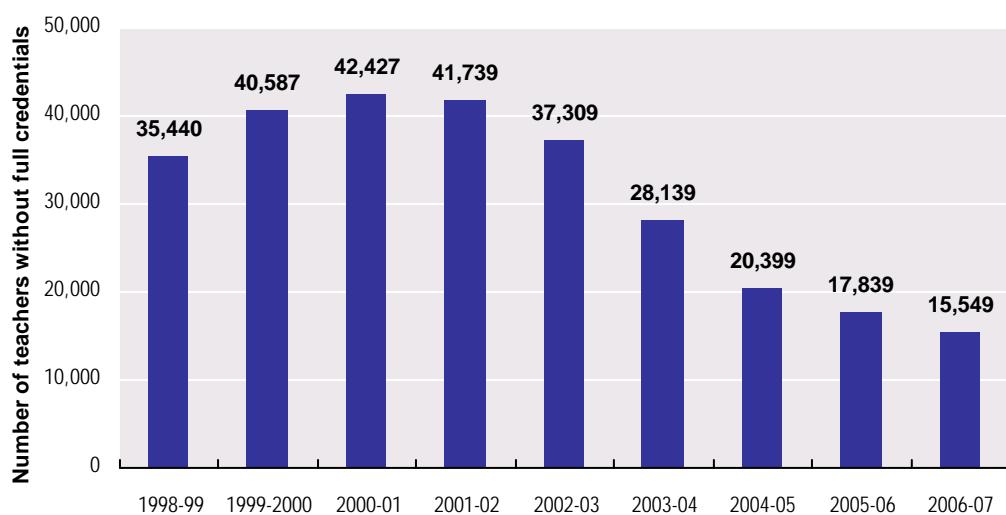
See Appendix D for a more detailed description of the secondary data analysis.

## APPENDIX B

# ADDITIONAL TEACHER SUPPLY, DEMAND, AND DISTRIBUTION GRAPHS

### CALIFORNIA TEACHER WORKFORCE

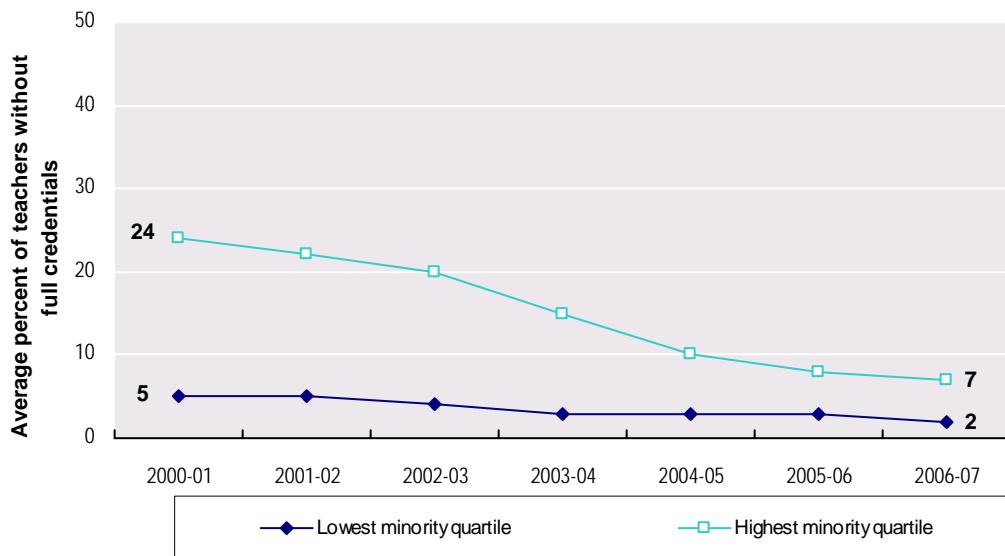
**Exhibit B-1**  
**Number of Underprepared Teachers, 1998-99 to 2006-07**



*See Appendix D for source and technical information.*

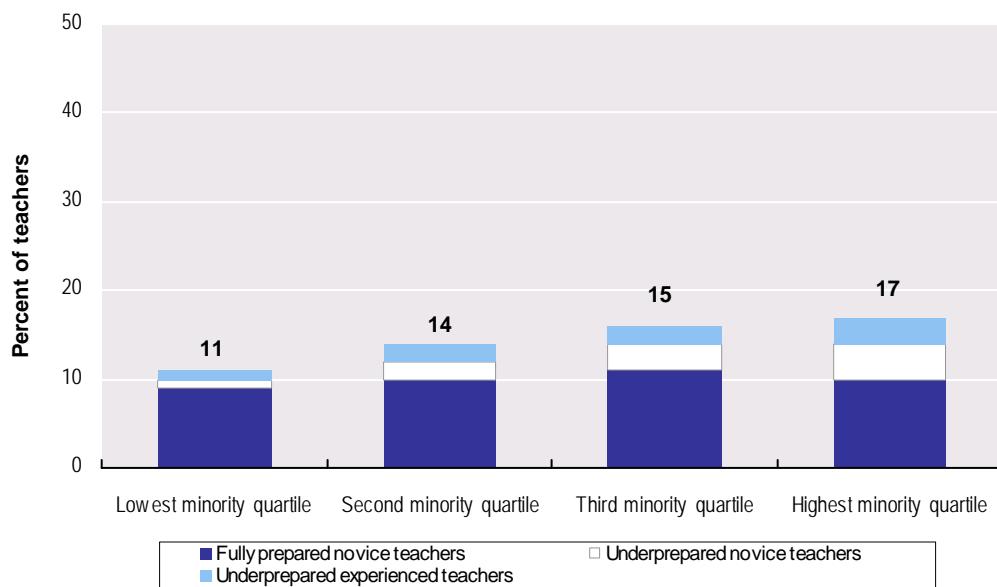
## Distribution by School-Level Minority Categories

**Exhibit B-2**  
**Percentage of Underprepared Teachers in Schools with the Highest and Lowest Percentages of Minority Students, 2000-01 to 2006-07**



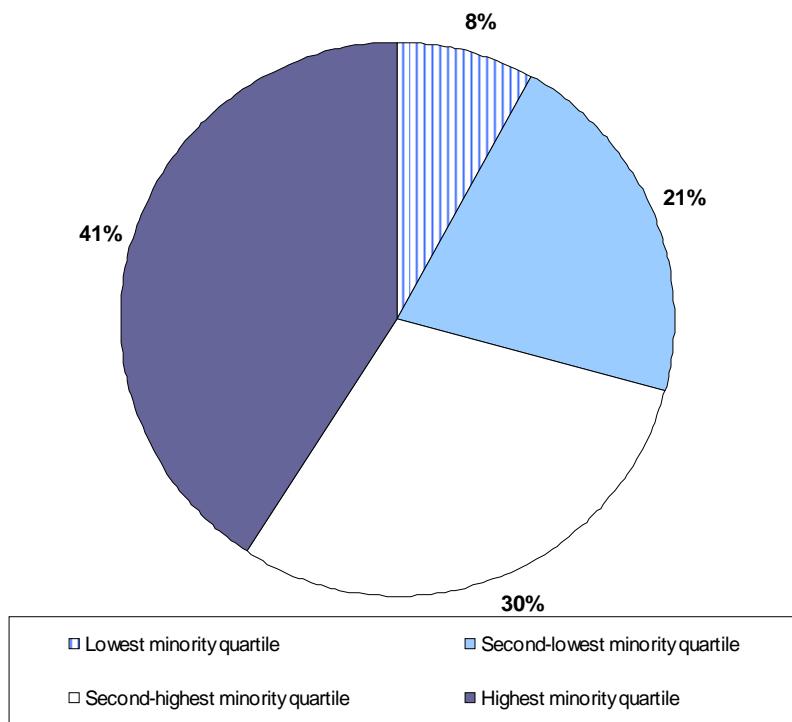
See Appendix D for source and technical information.

**Exhibit B-3**  
**Percentage of Underprepared and Novice Teachers, by School-Level Percentage of Minority Students, 2006-07**



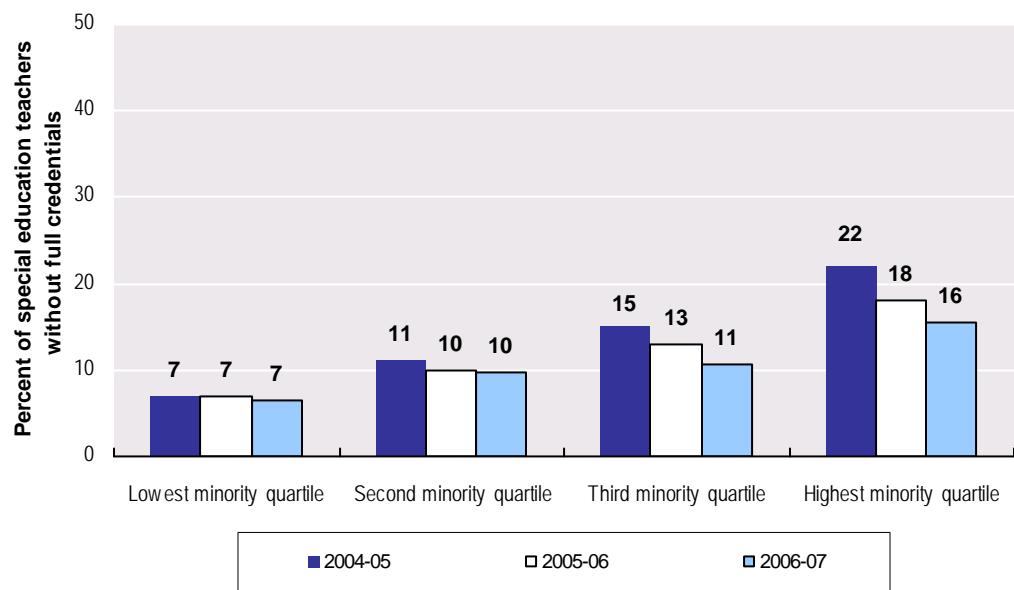
See Appendix D for source and technical information.

**Exhibit B-4**  
**Distribution of Interns by School-Level Percentage of**  
**Minority Students, 2006-07**



*See Appendix D for source and technical information.*

**Exhibit B-5**  
**Percentage of Underprepared Special Education Teachers,  
by School-Level Percentage of Minority Students, 2004-05 to 2006-07**

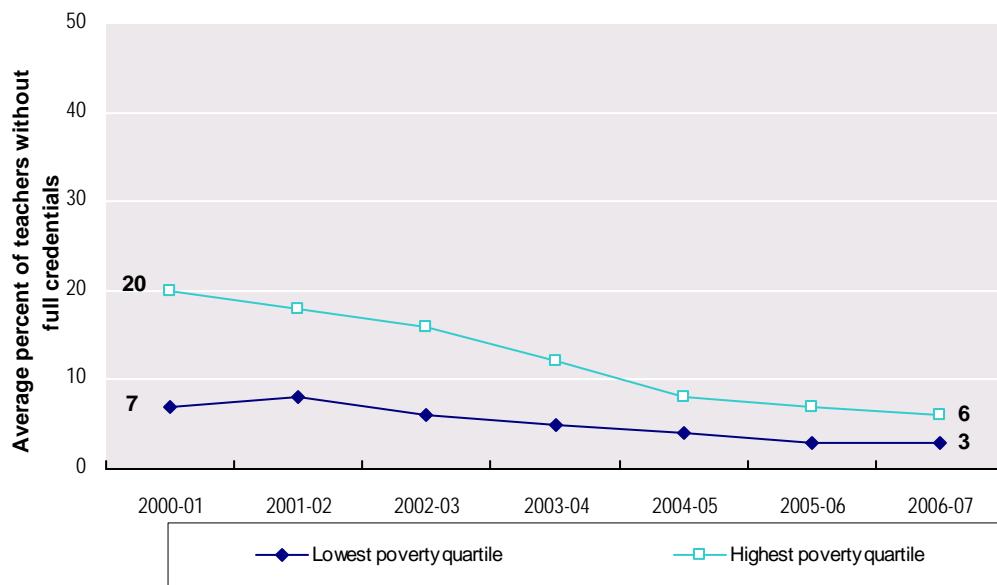


*See Appendix D for source and technical information.*

## DISTRIBUTION BY SCHOOL-LEVEL POVERTY CATEGORIES

Exhibit B-6

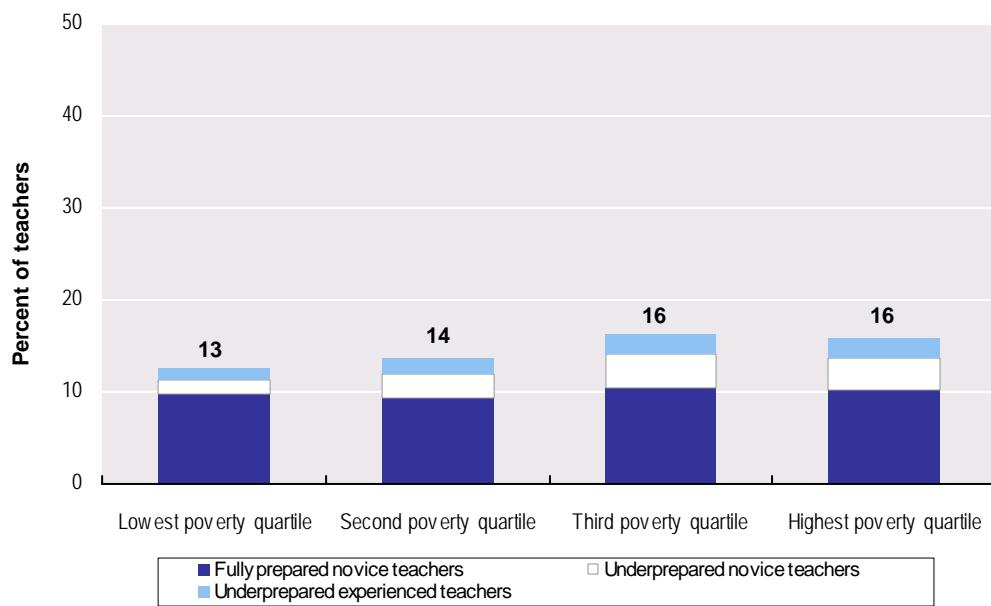
Percentage of Underprepared Teachers in Schools with the Highest and Lowest School-Level Percentages of Students in Poverty, 2000-01 to 2006-07



See Appendix D for source and technical information.

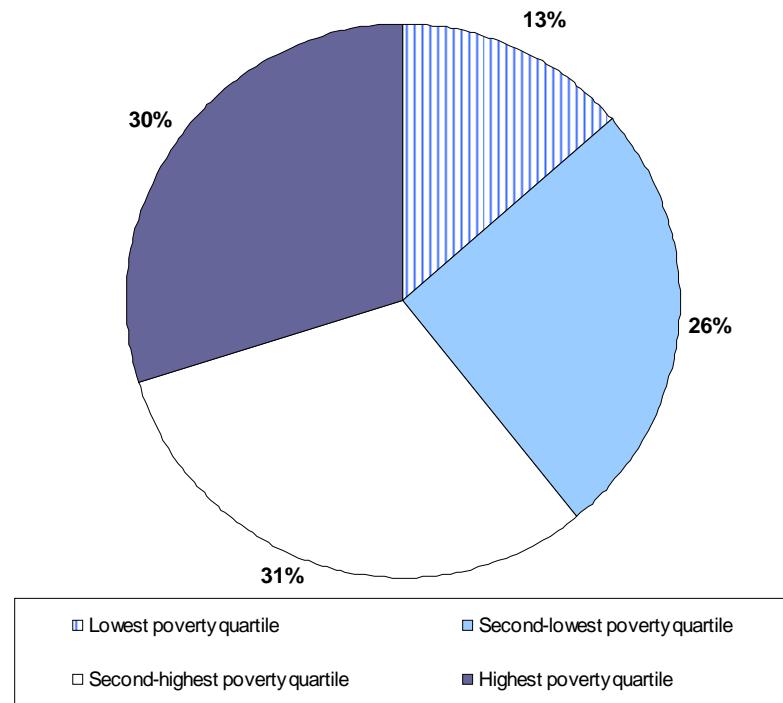
Exhibit B-7

Percentage of Underprepared and Novice Teachers, by School-Level Percentage of Students in Poverty, 2006-07



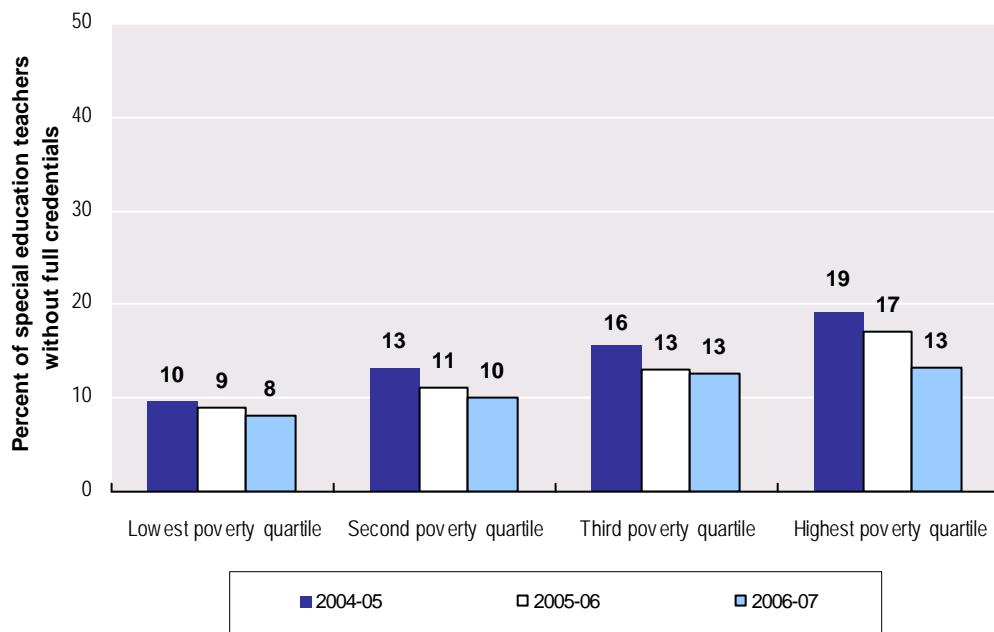
See Appendix D for source and technical information.

**Exhibit B-8**  
**Distribution of Interns**  
**by School-Level Percentage of Students in Poverty, 2006-07**



*See Appendix D for source and technical information.*

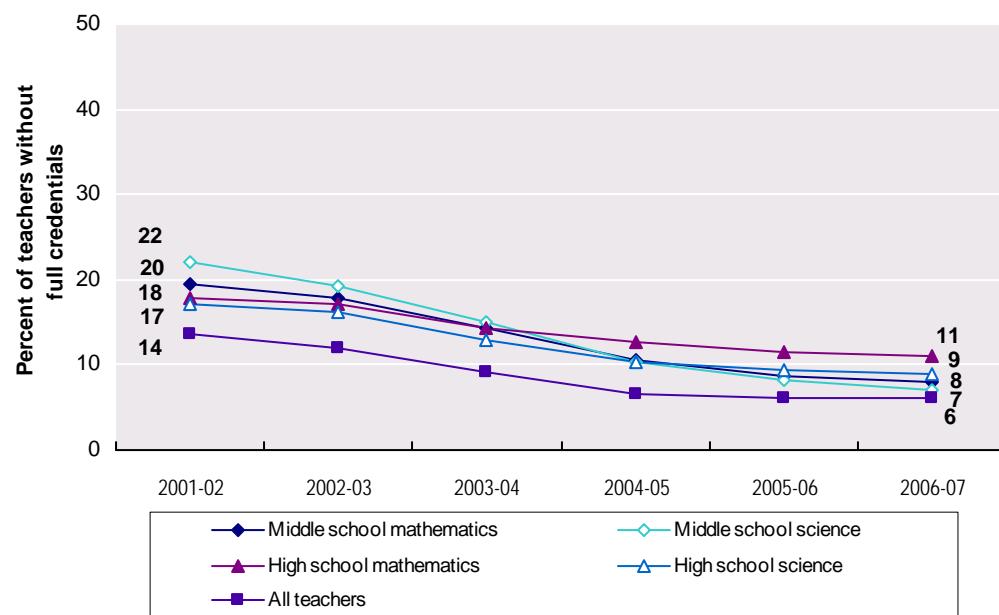
**Exhibit B-9**  
**Percentage of Underprepared Special Education Teachers, by School-Level Percentage of Students in Poverty, 2004-05 to 2006-07**



*See Appendix D for source and technical information.*

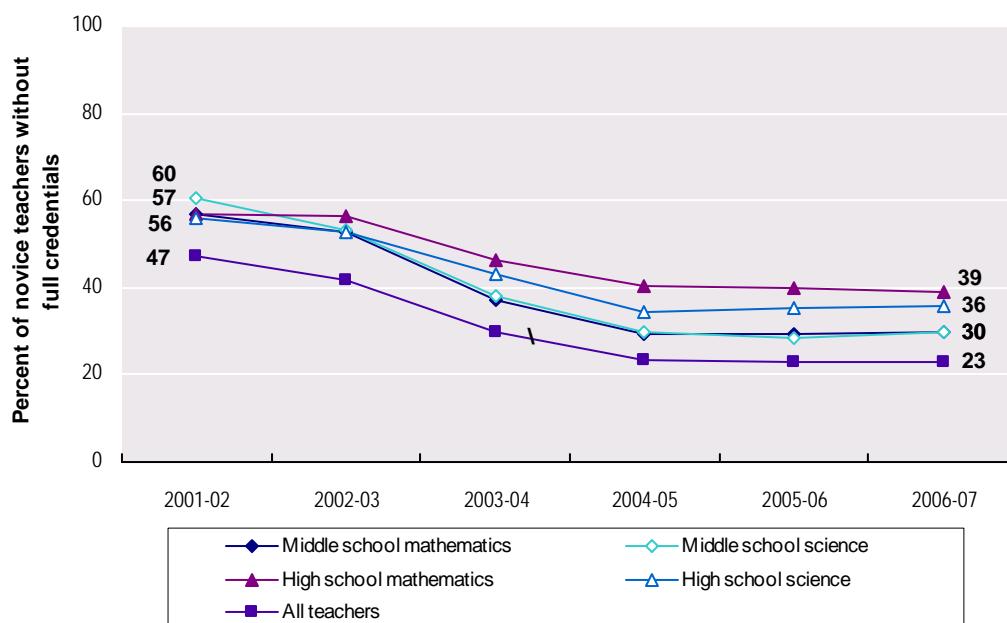
## FOCUS ON SCIENCE AND MATH

Exhibit B-10  
 Percentage of Underprepared Mathematics and Science Teachers,  
 2001-02 to 2006-07



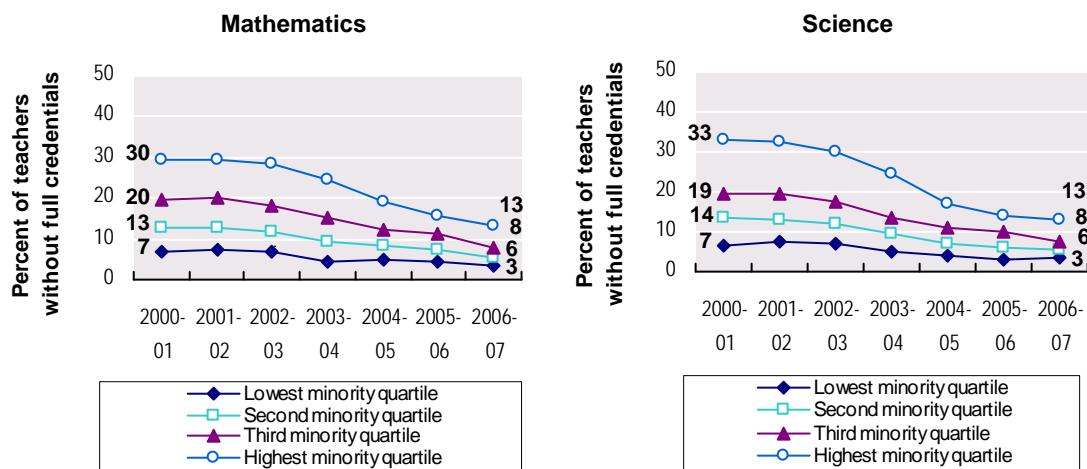
See Appendix D for source and technical information

Exhibit B-11  
 Percentage of Underprepared First- and Second-Year  
 Mathematics and Science Teachers, 2001-02 to 2006-07



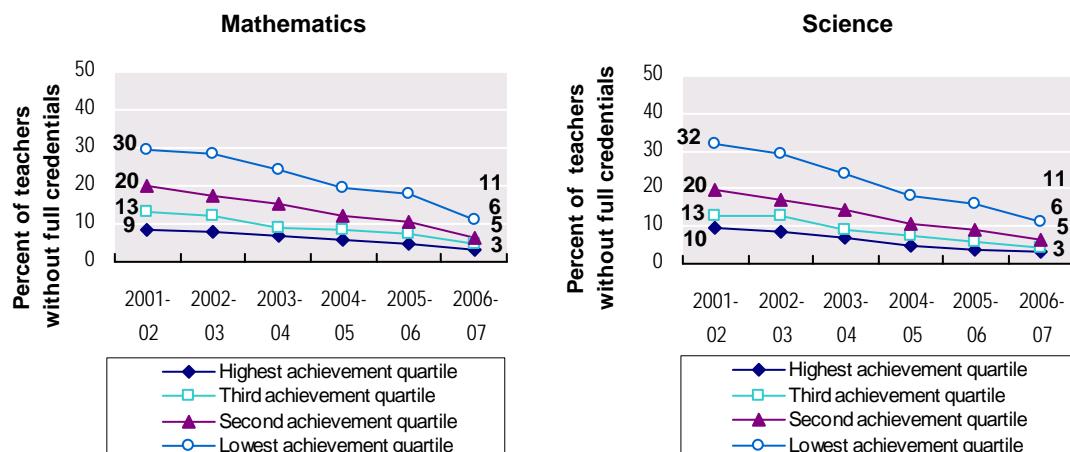
See Appendix D for source and technical information.

**Exhibit B-12**  
**Percentage of Underprepared Mathematics and Science Teachers,  
by School-Level Percentage of Minority Students, 2000-01 to 2006-07**



See Appendix D for source and technical information.

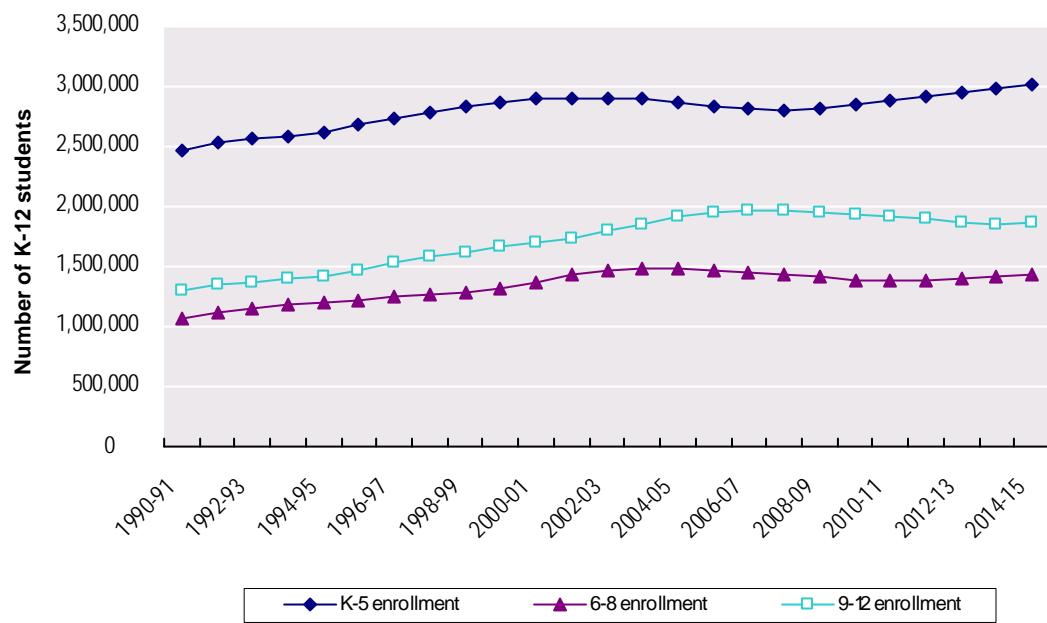
**Exhibit B-13**  
**Percentage of Underprepared Mathematics and Science Teachers,  
by API Achievement Quartile, 2001-02 to 2006-07**



See Appendix D for source and technical information.

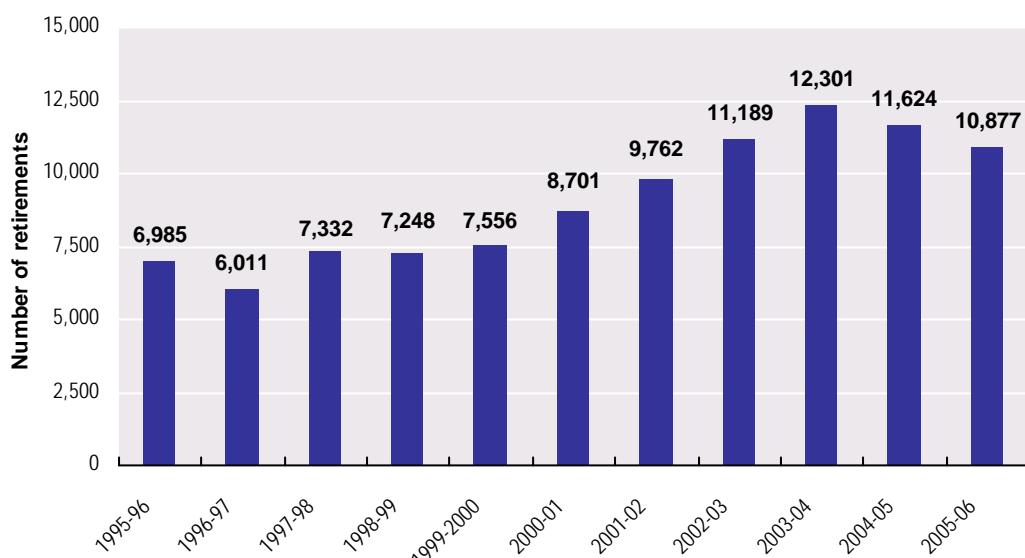
## FACTORS AFFECTING DEMAND FOR TEACHERS: STUDENT ENROLLMENT, TEACHER RETIREMENTS, AND CREDENTIAL PRODUCTION

Exhibit B-14  
Actual and Projected K-12 Public School Enrollment,  
1990-91 to 2014-15



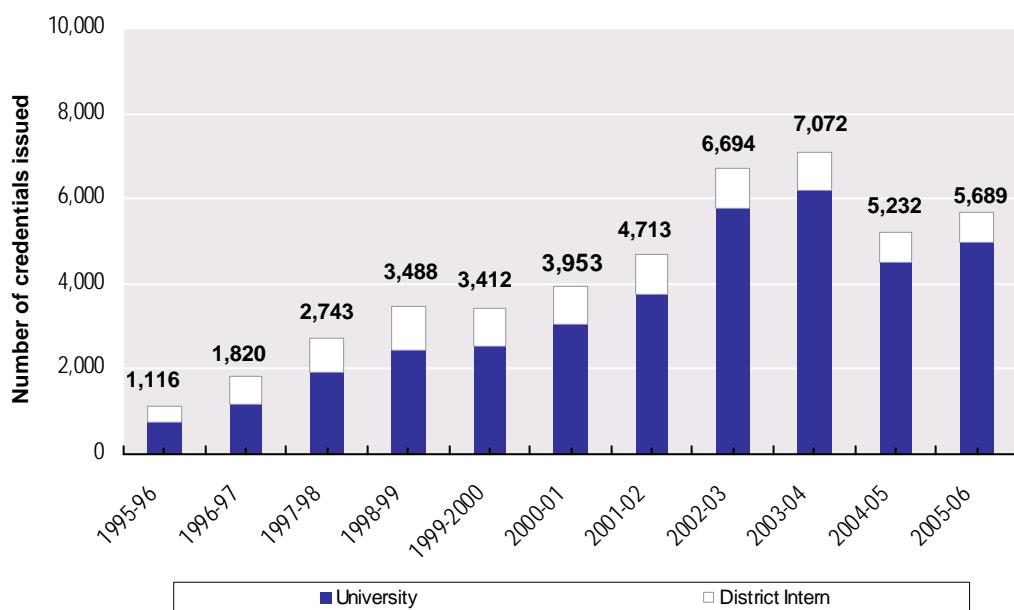
See Appendix D for source and technical information.

Exhibit B-15  
Number of California State Teachers' Retirement System (CalSTRS)  
Membership Retirements, 1995-96 to 2005-06



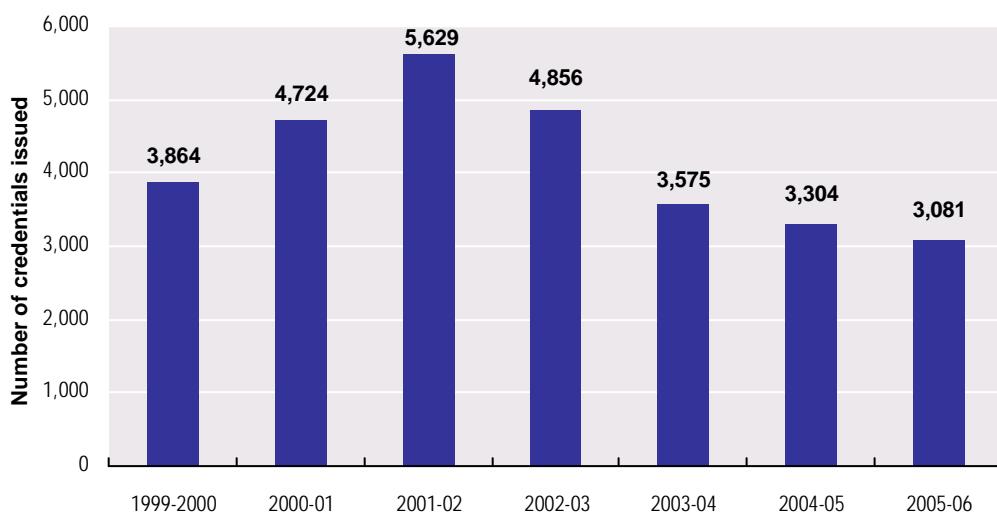
See Appendix D for source and technical information.

**Exhibit B-16**  
**Number of New University and District Intern Credentials Issued,  
1995-96 to 2005-06**



*See Appendix D for source and technical information.*

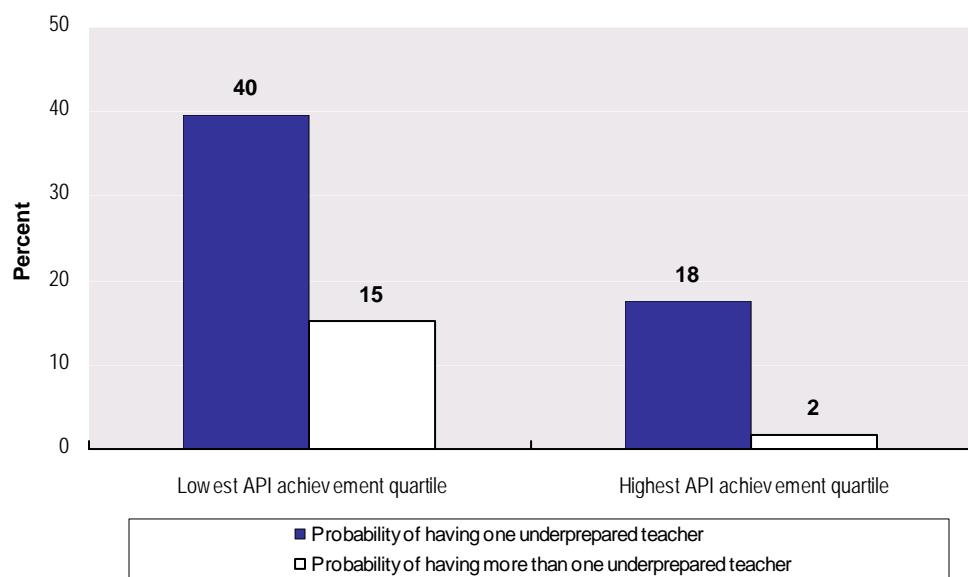
**Exhibit B-17**  
**Number of California Credentials Issued to Teachers Trained Out-of-State,  
1999-2000 to 2005-06**



*See Appendix D for source and technical information.*

## ODDS ANALYSIS

**Exhibit B-18**  
**Probability of Having Had an Underprepared Teacher**  
**by API Achievement Quartile**



*See Appendix D for source and technical information.*



## APPENDIX C

# TEACHER PREPARATION MEASURES

**Exhibit C-1**  
**Sample Admission Requirements**

Institution A	Institution B	Institution C
<ul style="list-style-type: none"><li>• Minimum 2.67 GPA</li></ul>	<ul style="list-style-type: none"><li>• Minimum 3.0 GPA</li></ul>	<ul style="list-style-type: none"><li>• Minimum 2.67 GPA</li></ul>
Can be waived	Can be waived	
<ul style="list-style-type: none"><li>• CBEST passage</li></ul>	<ul style="list-style-type: none"><li>• CBEST passage or proof of scheduled testing date</li></ul>	<ul style="list-style-type: none"><li>• CBEST passage</li></ul>
Passing can be waived until entering student teaching	Can be waived until second quarter	Passing mathematics subtest can be waived until entering student teaching
<ul style="list-style-type: none"><li>• CSET passage</li></ul>	<ul style="list-style-type: none"><li>• CSET passage</li></ul>	<ul style="list-style-type: none"><li>• CSET passage</li></ul>
Passing can be waived until entering student teaching	Can be waived until second quarter	
<ul style="list-style-type: none"><li>• No letters of reference for admission</li></ul>	<ul style="list-style-type: none"><li>• 3-5 letters of reference, depending on the program</li></ul>	<ul style="list-style-type: none"><li>• 2 letters of reference</li></ul>
3 letters are required prior to entering student teaching		
<ul style="list-style-type: none"><li>• No interview for admission. Interviews are held prior to entering student teaching</li></ul>	<ul style="list-style-type: none"><li>• Interview with one or two supervisors to determine purposefulness, communication skills, and commitment to teaching</li></ul>	<ul style="list-style-type: none"><li>• Interview to assess verbal and written language skills, professional goals and conduct, and cultural awareness</li></ul>
	<ul style="list-style-type: none"><li>• Writing sample, which is scored on a rubric for clarity, grammar, taking a stance, and defending a stance</li></ul>	<ul style="list-style-type: none"><li>• Verification of prerequisite field experience</li></ul>
		<ul style="list-style-type: none"><li>• Attend orientation meeting</li></ul>

Source: 2007 case study universities.

**Exhibit C-2**  
**California Standards for the Teaching Profession and**  
**Teaching Performance Expectations**

CSTP	TPE
Understanding and Organizing Subject Matter for Student Learning	1. Specific pedagogical skills for subject matter instruction
Assessing Student Learning	2. Monitoring student learning during instruction 3. Interpretation and use of assessments
Engaging and Supporting Students in Learning	4. Making content accessible 5. Student engagement 6. Developmentally appropriate teaching practices 7. Teaching English learners
Planning Instruction and Designing Learning Experiences for Students	8. Learning about students 9. Instructional planning
Creating and Maintaining Effective Environments for Student Learning	10. Instructional time 11. Social environment
Developing as a Professional Educator	12. Professional, legal, and ethical obligations 13. Professional growth

**Exhibit C-3**  
**Sample Lesson Observation Form and Rubric**

Standard 1 Continuum: Engaging & Supporting Students	Rating	Comments
A. Connects students' prior knowledge, life experience, and interests with learning goals		
B. Uses a variety of instructional strategies and resources to respond to students' diverse needs		
C. Facilitates learning experiences that promote self-direction, autonomy, collaboration, and choice for all students		
D. Engages in problem-solving, critical thinking, and other activities that make subject matter meaningful		
Standard 2 Continuum: Effective Learning Environments	Rating	Comments
A. Creates a physical environment that engages all students		
B. Establishes a climate that promotes fairness, respect, social development, and responsibility		
C. Establishes and maintains standards for student behavior		
D. Plans and implements classroom rules, procedures, and routines		
E. Uses instructional time effectively		
Standard 3 Continuum: Organizing Subject Matter	Rating	Comments
A. Organizes, demonstrates, and connects knowledge of subject matter and student development		
B. Develops student understanding through instructional strategies		
C. Uses materials, resources, and technology to make subject matter accessible to all students		
Standard 4 Continuum: Planning Instruction	Rating	Comments
A. Reflects all students' backgrounds, interests, and developmental learning needs		
B. Establishes goals for learning and designing long and short term plans		
C. Develops, sequences, and revises instructional plans		
Standard 5 Continuum: Assessing Student Learning	Rating	Comments
A. Collects and uses multiple sources of information to assess student learning		
B. Involves and guides all students in assessing own learning		
C. Communicates with students, families, and other audiences about student progress		

Use the following descriptions to guide the rating of each element of the CSTP continuum:

<b>1. Beginning</b>	<b>2. Emerging</b>	<b>3. Applying</b>	<b>4. Integrating</b>	<b>5. Innovating</b>	<b>Not Observed (N/O)</b>
Candidate is aware of the element of the continuum of the CSTP standard, but its implementation and effectiveness in instructional practice is not evident.	Candidate is making more frequent, more consistent attempts to implement the element of the continuum of the CSTP standard in instructional practice with limited effectiveness.	Candidate is making frequent, consistent, attempts to implement the element of the continuum of the CSTP standard in instructional practice with some effectiveness.	Candidate regularly implements the element of the continuum of the CSTP standard in instructional practice with greater effectiveness.	Candidate consistently implements the element of the continuum of the CSTP standard in instructional practice with greatest effectiveness.	This element of the continuum of the CSTP standard was not seen during this observation.

Source: 2007 case study district.

**Exhibit C-4**  
 **PACT Teaching Event Requirements for Elementary Mathematics**

Teaching Event Task	What to Do	What to Submit
1. Context for Learning (TPEs 7,8)	<ul style="list-style-type: none"> <li>✓ Provide relevant information about your instructional context and your students as learners of mathematics.</li> </ul>	<input type="checkbox"/> Context Form <input type="checkbox"/> Context Commentary
2. Planning Instruction & Assessment (TPEs 1,2,3,4,6,7,8,9, 10,12)	<ul style="list-style-type: none"> <li>✓ Select a learning segment of 3-5 lessons that support students in building conceptual understanding, computational/procedural fluency, and mathematical reasoning skills.</li> <li>✓ Create an instruction and assessment plan for the learning segment and write lesson plans.</li> <li>✓ Write a commentary that explains your thinking in writing the plans.</li> <li>✓ Record daily reflections, to submit in the reflection section of the Teaching Event.</li> </ul>	<input type="checkbox"/> Lesson Plans for Learning Segment <input type="checkbox"/> Instructional Materials <input type="checkbox"/> Planning Commentary
3. Instructing Students & Supporting Learning (TPEs 1,2,3,4,5,6,7,10, 11)	<ul style="list-style-type: none"> <li>✓ Review your plans and prepare to videotape your class. Identify opportunities to develop your students' ability to engage in mathematical discourse and understand mathematical concepts.</li> <li>✓ Videotape the lesson you have identified.</li> <li>✓ Review the videotape to identify one or two video clips portraying the required features of your teaching. The total running time should not exceed 15 minutes.</li> <li>✓ Write a commentary that analyzes your teaching and your students' learning in the video clip(s).</li> </ul>	<input type="checkbox"/> Video Clip(s) <input type="checkbox"/> Video Label Form <input type="checkbox"/> Instruction Commentary
4. Assessing Student Learning (TPEs 2,3,4,5,13)	<p>Select one student assessment from the learning segment and analyze student work.</p> <ul style="list-style-type: none"> <li>✓ Identify three student work samples that illustrate class trends in what students did and did not understand.</li> <li>✓ Write a commentary that analyzes the extent to which the class met the standards/objectives, analyzes the individual learning of two students represented in the work samples, and identifies next steps in instruction.</li> </ul>	<input type="checkbox"/> Student Work Samples <input type="checkbox"/> Evaluative Criteria or Rubric <input type="checkbox"/> Assessment Commentary
5. Reflecting on Teaching & Learning (TPEs 7,8,13)	<ul style="list-style-type: none"> <li>✓ Provide your daily reflections.</li> <li>✓ Write a commentary about what you learned from teaching this learning segment.</li> </ul>	<input type="checkbox"/> Daily Reflections <input type="checkbox"/> Reflective Commentary

Source: PACT Consortium. (2006). *Elementary Mathematics Teaching Event Candidate Handbook, 2006-07.*

[http://www.pactpa.org/te/docs/te\\_rev\\_nov\\_06/EM\\_TE\\_08\\_07\\_06.doc](http://www.pactpa.org/te/docs/te_rev_nov_06/EM_TE_08_07_06.doc)

## APPENDIX D

# SOURCE AND TECHNICAL INFORMATION FOR EXHIBITS

### CHAPTER 1. INTRODUCTION

**Exhibit 1 – CST Results by Ethnicity, 2003-07.** Data were obtained from the CDE's Web site at <http://www.cde.ca.gov/nr/ne/yr07/yr07rel98.asp>.

### CHAPTER 2. TEACHER SUPPLY, DEMAND, AND DISTRIBUTION

**Exhibit 2 – Number of K-12 Teachers in the California Workforce, 1997-98 to 2006-07.** Data were obtained from the CDE's DataQuest Web site at <http://dq.cde.ca.gov/dataquest/>.

**Exhibit 3 – Number of Underprepared Teachers, by Credential Type, 1999-2000 to 2006-07.** Data from the Professional Assignment Information Form (PAIF) (1999-2000 through 2006-07) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>.

Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (i.e., preliminary, professional clear, life credential). Teachers with “more than one underprepared credential type” are those teachers who reported holding a district or university intern credential and an emergency permit, pre-intern certificate, or waiver; these teachers cannot be placed in one of the other two categories. Teachers who did not report holding any type of credential, permit, or certificate are identified as “missing credential information.”

**Exhibit 4 – Number of Novice Teachers, by Credential Status, 2000-01 to 2006-07.** Data from the PAIF (2000-01 through 2006-07) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers who reported that they had 0, 1, or 2 years of teaching experience are included in this analysis.

Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). Teachers who did not report holding any

type of credential, permit, or certificate are not included in this analysis.

**Exhibit 5 –Distribution of Schools by School-Level Percentage of Underprepared Teachers, 2006-07.** Two data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts and (2) the PAIF. These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (i.e., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

**Exhibit 6 – Top 10 California Counties, by Number of Underprepared Teachers and Percentage of Underprepared Teachers, 2006-07.** Data from DataQuest are presented in this exhibit. These data were obtained from the CDE's DataQuest Web site at <http://dq.cde.ca.gov/dataquest/>.

**Exhibit 7 –Distribution of Schools by School-Level Percentage of Novice Teachers, 2006-07.** Two data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, and (2) the PAIF. These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF.

**Exhibit D-1**  
**Number of Schools, by API Quartile, for API Analyses**

API Quartile	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Highest achievement quartile	1,724	1,737	1,830	1,878	1,920	1,970	2,027
Second-highest achievement quartile	1,717	1,747	1,833	1,887	1,952	2,016	1,991
Second-lowest achievement quartile	1,730	1,745	1,855	1,896	1,958	1,965	2,006
Lowest achievement quartile	1,748	1,764	1,859	1,892	1,970	2,025	1,986
<b>Total</b>	<b>6,919</b>	<b>6,993</b>	<b>7,377</b>	<b>7,553</b>	<b>7,800</b>	<b>7,976</b>	<b>8,010</b>

**Exhibit 8 – Average Percentage of Underprepared Teachers in Schools in the Highest and Lowest API Achievement Quartiles, 2000-01 to 2006-07.** For each year presented in this exhibit, three data files were merged to conduct the analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Academic Performance Index (API) Growth data file. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE’s Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (i.e., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. The numbers of schools included in these analyses vary each year because (1) the number of open schools changes from year to year as schools open and close, and (2) the number of schools with complete data in all three files changes from year to year (see Exhibit D-1).

**Exhibit 9 –Distribution of Interns by School-Level API, 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the API Growth data file. The List of California Public Schools and Districts and the

PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE’s Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. This analysis includes teachers who responded on the PAIF that they were a “university intern” or a “district intern.” Only full-time teachers are included in this analysis.

**Exhibit 10 – Percentage of Underprepared and Novice Teachers, by API Achievement Quartile, 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the API Growth data file. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE’s Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (i.e., preliminary, professional clear, life credential). This definition of underprepared includes

teachers holding intern credentials or certificates. See Exhibit D-1 for the number of schools included in this analysis.

**Exhibit 11 – Percentage of Underprepared and Novice Teachers, by School-Level Percentage of 10th-Grade Students Passing the CAHSEE, 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the California High School Exit Exam (CAHSEE) Statewide Research File. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The CAHSEE Statewide Research File was obtained from the CDE's CAHSEE Web site at <http://cahsee.cde.ca.gov/datafiles.asp>.

All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (i.e., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

Tenth-grade students were given one opportunity to take the CAHSEE. Students absent on the day of the examination were generally given a makeup test at a later date during the school year. To determine the total number of 10th-grade students who passed the English portion of the CAHSEE, the variable "combined administration" was used to capture students who took the examination on either the established test date or the makeup test date. To protect student privacy, the state gave all schools with 10 or fewer 10th-grade students taking the examination a value of "0" for the percentage of students passing the English or the mathematics portion of the examination. Because this "0" did not mean that no students passed the English or mathematics portion of the CAHSEE, schools with 10 or fewer students in either English or mathematics are not included in the analysis.

**Exhibit 12 – Percentage of Underprepared Teachers, by Authorization, 2000-01 to 2006-07.** Data from the PAIF (2000-01 to 2006-07) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers are included in this analysis. For each credential authorization—elementary, secondary, and

special education—the percentage of underprepared teachers (those who reported on the PAIF that they held a credential, permit, or certificate other than a "full credential") is calculated as a proportion of full-time teachers. Teachers could report more than one type of credential authorization. Teachers who did not report holding any type of credential, permit, or certificate are not included in this analysis.

**Exhibit 13 – Percentage of Underprepared First- and Second-Year Teachers, by Authorization, 2004-05 to 2006-07.** Data from the PAIF (2004-05 to 2006-07) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers who reported that they had 0, 1, or 2 years of teaching experience are included in this analysis.

Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (i.e., preliminary, professional clear, life credential). Teachers who did not report holding any type of credential, permit, or certificate are not included in this analysis.

**Exhibit 14 – Percentage of Out-of-Field High School Teachers in Core Subjects, 2003-04 and 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) Course Data by Assignment (Assign06). These data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Only full-time teachers in California high schools have been included in this analysis. Teachers who indicated they are fully credentialed but do not have subject-matter authorization in their assigned subject are defined as "out-of-field." Teachers were identified as being "assigned" to a subject if they reported on the PAIF that they taught at least one class in a core subject—English, mathematics, social science, physical science, or life science. Physical science assignments are limited to chemistry, physics, and physical science courses; life science assignments are limited to biology courses. Teachers with earth science, integrated/coordinated science, or other science assignments (e.g., astronomy, zoology, oceanography) are not included in the analysis. Teachers can have more than one assignment. For example, a teacher who teaches three periods of biology and two periods of English would have an English assignment and a life science assignment, both of which require the teacher to have the proper single-subject authorization. Data for 2006-07 cannot be compared with 2003-04 data in Exhibit 20 of the *California's Teaching Force 2004* report because of a change in methodology. (In previous years, only teachers who

responded “Yes” to “Secondary/Subject-Specific Classroom” under Authorized Teaching Area[s] on the PAIF were included in the analysis; we did not make that restriction this year.)

**Exhibit 15 – Age Distribution of K-12 Public School Teachers, 2002-03 and 2006-07.** Data from the PAIF are presented in this exhibit. These data were obtained by special request from the CDE.

**Exhibit 16 – Number of Enrollees in Teacher Preparation Programs, 2001-02 to 2004-05.** Data from the California Commission on Teacher Credentialing’s (CCTC) *Teacher Supply in California* 2005-06 report are presented in this exhibit. These data were obtained from the CCTC’s Web site at [http://www.ctc.ca.gov/reports/TS\\_2005\\_2006.pdf](http://www.ctc.ca.gov/reports/TS_2005_2006.pdf).

**Exhibit 17 – Number of New Preliminary Teaching Credentials Issued, 1997-98 to 2005-06.** Data from the CCTC are presented in this exhibit. Data for 1997-98 through 1998-99 were obtained from the CCTC by special request. Data for 1999-2000 through 2005-06 were obtained from the CCTC’s annual *Teacher Supply in California* reports at <http://www.ctc.ca.gov/reports/leg-reports-archive.html>. “New preliminary credentials” include first-time, new-type preliminary or professional clear credentials. (First-time, new-type professional clear credentials typically represent a newly credentialed teacher, not an experienced veteran earning a Level II credential.) Intern credentials are not included in this exhibit.

**Exhibit 18 – Public K-12 Enrollment Change, 2005-2015.** Data from the California Department of Finance (CDOF) 2006 Series: *California K-12 Public Enrollment and High School Graduates* are presented in this exhibit. The 2006 Series was obtained from the CDOF Web site at <http://www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Projections/Enrollment/K12-05/K12EnrlmntPrjctns2006.php>.

### **CHAPTER 3. TEACHER PREPARATION**

**Exhibit 20 – 2004-05 CSET Pass Rates for First -Time Test Takers.** Data were obtained from CCTC’s Web site at <http://www.ctc.ca.gov/reports/Exam-Pass-Rate-Rpt-Apr-2006.pdf>. CCTC includes the number of test takers and the number of test takers who passed commission-approved exams.

## CHAPTER 4. TEACHER HIRING

**Survey Data for Exhibit 22 and Exhibit 23**  
**Top and Bottom Qualifications Reported as “Very Important” or “Important”**  
**When Making a Job Offer**

		Very Important	Important	Somewhat Important	Not at All Important	n
Certification status (holds a valid teaching certificate)	%	93	7	0	0	277
	SE	1.68	1.68	--	--	
Flexibility for staffing because of multiple credentials	%	29	43	23	5	215
	SE	3.31	3.61	3.08	1.72	
Certification exam results (e.g., CBEST, CSET)	%	62	21	13	4	228
	SE	3.36	2.76	2.30	1.36	
National Board Certification	%	10	27	40	23	147
	SE	2.47	4.00	4.37	3.75	
Overall grades in college	%	6	36	45	13	142
	SE	2.12	4.33	4.42	2.94	
College major	%	21	39	36	4	201
	SE	2.79	3.67	3.58	1.57	
Grades in college major	%	14	38	40	8	130
	SE	3.21	4.56	4.55	2.61	
Reputation of college attended	%	8	34	44	14	135
	SE	2.57	4.20	4.56	3.19	
Education level (e.g., master’s degree)	%	12	42	41	5	205
	SE	2.53	3.68	3.61	1.64	
Teaching experience	%	47	40	13	0	267
	SE	3.22	3.17	2.23	0.30	
Seniority in the district	%	15	25	44	16	120
	SE	3.27	4.31	4.88	3.53	

**Survey Data for Exhibit 22 and Exhibit 23 (Continued)**  
**Top and Bottom Qualifications Reported as “Very Important” or “Important”**  
**When Making a Job Offer**

		Very Important	Important	Somewhat Important	Not at All Important	n
Non-teaching work experience	%	5	19	66	10	196
	SE	1.60	3.02	3.53	2.10	
Experience working with the student population served by your school	%	43	38	19	0	265
	SE	3.20	3.17	2.60	0.28	
Experience working with the curriculum and program used by your school	%	30	42	27	1	258
	SE	3.04	3.26	2.88	0.57	
Performance student teaching, if candidate student taught in district	%	52	34	13	1	253
	SE	3.34	3.15	2.20	0.60	
Letters of recommendation	%	33	46	20	1	269
	SE	3.07	3.25	2.60	0.71	
Sample lesson plans or unit plans	%	13	32	46	9	191
	SE	2.54	3.63	3.88	2.20	

*Note: Survey question asked principals to report “yes” or “no” if they considered the included qualifications when making job offers. Results presented in this table are for those principals who reported “yes” and chose to rate the importance of the qualification.*

Source: 2007 SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 7.

**Survey Data for Exhibit 25**  
**Principals Who Report That They Are “Usually” or “Always” Able to Hire Teachers Who Are Fully Prepared to Meet Their Students’ Needs**

		All
Always	%	28
	SE	2.87
Usually	%	57
	SE	3.07
Sometimes	%	14
	SE	2.06
Rarely	%	1
	SE	0.47
	<i>n</i>	295

		API Level		
		Low	Middle	High
Usually or always	%	71	84	94
	SE	5.04	3.70	2.50
	<i>n</i>	65	84	96

API Level Comparisons*	$\chi^2$	df	p-value
Low vs. middle	3.84	1	0.05
Middle vs. high	5.72	1	0.02
Low vs. high	14.56	1	<0.01

*Comparisons are based on principals who answered “Usually” or “Always” versus those who answered “Sometimes” or “Rarely.”*

Source: 2007 SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 8.

## CHAPTER 5. TEACHER EVALUATION

**Survey Data for Exhibit 26**  
**Evaluation Processes Used With “All” or “Almost All” Teachers**

		All or Almost All	About Three- Fourths	About Half	About a Quarter	None or Almost None	<i>n</i>
Pre-observation conference	%	73	5	7	7	8	293
	SE	2.76	1.42	1.57	1.67	1.65	
Announced observation conducted by an administrator	%	81	6	7	4	2	294
	SE	2.41	1.38	1.56	1.23	0.93	
Unannounced observation conducted by an administrator	%	61	8	9	6	16	292
	SE	2.98	1.71	1.67	1.37	2.29	
Post-observation conference conducted by an administrator	%	84	7	5	3	1	291
	SE	2.28	1.55	1.42	1.12	0.40	
Copy of the completed observation form provided to teacher	%	91	4	2	2	1	294
	SE	1.71	0.22	0.76	0.77	0.70	
Review of lesson or unit plans	%	57	17	11	6	9	294
	SE	3.07	2.34	1.88	1.40	1.81	
Review of classroom records	%	28	19	17	17	19	289
	SE	2.84	2.46	2.34	2.34	2.47	
Creation of a written improvement plan	%	15	4	5	24	52	290
	SE	2.24	1.14	1.43	2.55	3.09	
Referral of the teacher to PAR (Peer Assistance and Review) team	%	7	1	2	10	80	292
	SE	1.66	0.62	0.74	1.76	2.43	
Peer observation that contributes to evaluation ratings or becomes part of the observed teacher’s file	%	6	2	2	7	83	294
	SE	1.51	0.76	0.81	1.60	2.32	
Teacher self-evaluation that contributes to evaluation ratings or becomes part of the teacher’s file	%	15	6	5	10	64	290
	SE	2.28	1.54	1.41	1.77	3.03	
Survey of teacher’s students and/or their families	%	3	1	3	4	89	291
	SE	1.11	0.71	1.04	1.14	1.92	

Source: 2007 SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 13.

**Survey Data for Exhibit 27**  
**Principal Reports of “Very Important” Aspects of Teaching Quality**

		Very Important	Important	Somewhat Important	Not at All Important	n
Content knowledge	%	78	21	1	0	295
	SE	2.52	2.50	0.38	--	
Classroom management skills	%	96	4	0	0	294
	SE	1.16	1.16	--	--	
Knowledge of curriculum and instructional materials	%	82	17	1	0.0	293
	SE	2.35	2.32	0.40	--	
Collection and use of data to inform instructional decision making	%	65	33	2	0	295
	SE	2.95	2.90	0.93	--	
Ability to teach culturally diverse learners	%	66	30	4	0	294
	SE	2.94	2.83	1.27	0.30	
Ability to teach students who range in academic proficiency, including students with IEPs (Individualized Educational Programs)	%	72	27	1	0	294
	SE	2.76	2.73	0.51	0.31	
Ability to teach English learners (ELs)	%	62	31	5	2	294
	SE	3.01	2.86	1.33	0.95	
Communication with students, families, and the community	%	51	44	5	0	294
	SE	3.10	3.08	1.22	0.25	
Adherence to school policies and procedures (e.g., attendance)	%	58	34	8	0	295
	SE	3.05	2.92	1.73	--	
Use of required curricula or materials	%	62	33	5	0	294
	SE	3.00	2.91	1.36	--	
Students' performance on standardized tests	%	22	47	27	4	294
	SE	2.54	3.11	2.77	1.25	
Students' attendance	%	20	35	27	18	293
	SE	2.45	2.95	2.76	2.43	
Number of disciplinary referrals	%	17	41	30	12	290
	SE	2.29	3.05	2.88	2.17	

Source: 2007 SRI Survey of Principal’s Practices in Hiring, Evaluating, and Supporting Teachers; Question 12.

**Survey Data for Exhibit 28**  
**Importance of Formal Performance Review on Retention and Professional Development**

		Very Important	Important	Somewhat Important	Not at All Important	n
Determining a teacher's professional goals for the next year	%	50	39	8	3	294
	SE	3.10	3.01	1.72	1.00	
Determining a teacher's professional development plans for the next year	%	48	41	10	1	295
	SE	3.09	3.04	1.76	0.71	
Determining a teacher's salary for next year	%	2	3	7	88	292
	SE	0.79	1.13	1.51	1.97	
Determining the retention of a new teacher	%	87	11	1	1	293
	SE	2.09	1.92	0.64	0.67	

Source: 2007 SRI Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers; Question 10d.

**Survey Data for Exhibit 29**  
**Usefulness of Practices to Identify Teachers' Needs**

		Very Useful	Useful	Somewhat Useful	Not at All useful	n
Formally evaluating teachers.	%	48	38	12	2	
	SE	3.11	3.04	1.88	0.92	293
Observing teachers' lessons <i>outside</i> of the formal teacher evaluation process	%	71	24	4	1	
	SE	2.79	2.63	1.28	0.67	292
Taking brief tours through classrooms (e.g., learning walks)	%	81	16	3	0	
	SE	2.32	2.13	1.03	0.31	293
Analyzing student achievement scores on standardized tests	%	48	40	11	1	
	SE	3.11	3.04	1.89	0.43	293
Looking at bulletin boards and other parts of the classroom learning environment	%	23	47	25	5	
	SE	2.65	3.11	2.62	1.29	294
Reviewing student work	%	48	41	10	1	
	SE	3.07	3.04	1.79	0.71	292
Asking teachers about their learning needs or goals for professional growth	%	46	41	12	1	
	SE	3.09	3.02	1.98	0.81	294
Talking with teacher leaders (e.g., department chair)	%	41	32	20	7	
	SE	3.03	2.89	2.52	1.69	292
Listening to feedback from parents	%	20	36	40	4	
	SE	2.45	2.94	3.03	1.19	293
Monitoring the number of disciplinary referrals	%	14	38	40	8	
	SE	2.07	3.00	3.06	1.67	293
Monitoring student attendance rates	%	12	26	39	23	
	SE	1.98	2.69	3.04	2.62	293

Source: 2007 SRI Survey of Principal's Practices in Hiring, Evaluating, and Supporting Teachers; Question 17.

**Exhibit D-2**  
**Number of Schools, by School-Level Minority, for Minority Analyses**

Percent of Nonwhite Student Populations	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Lowest minority quartile	1,829	1,859	1,900	1,939	2,006	1,864	1,877
Second minority quartile	1,832	1,866	1,902	1,947	2,000	1,864	1,877
Third minority quartile	1,833	1,852	1,898	1,938	2,007	1,865	1,877
Highest minority quartile	1,840	1,857	1,906	1,950	2,012	1,865	1,877
<b>Total</b>	<b>7,334</b>	<b>7,452</b>	<b>7,606</b>	<b>7,774</b>	<b>8,025</b>	<b>7,458</b>	<b>7,508</b>

## **APPENDIX B. ADDITIONAL GRAPHS FOR SUPPLY AND DEMAND OF TEACHERS**

**Exhibit B-1 – Number of Underprepared Teachers, 1998-99 to 2006-07.** Data from the PAIF (1997-98 through 2006-07) were used for this analysis. These data were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials.

**Exhibit B-2 – Percentage of Underprepared Teachers in Schools with the Highest and Lowest Percentages of Minority Students, 2000-01 to 2006-07.** For data for 2000-01 to 2004-05 and 2006-07, three data files were merged to conduct the analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Enrollment by Ethnic Group and School aggregate data file. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The Enrollment by Ethnic Group and School aggregate data file was obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>.

In 2005-06, the Enrollment by Ethnic Group and School aggregate data file was not released. The School Information Form (SIF) - Section B was used to calculate school-level percentage of minority students and merged with the List of California Public Schools and Districts and the PAIF. The SIF - Section B was obtained from CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>.

All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are

excluded from this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

The numbers of schools included in these analyses vary each year because (1) the number of open schools changes from year to year as schools open and close, (2) the number of schools with complete data in all three files changes from year to year, and (3) for 2005-06, we had to use a different data file to calculate minority percentages, and many schools did not have complete data in this file (see Exhibit D-2 for the numbers of schools included in these analyses).

**Exhibit B-3 – Percentage of Underprepared and Novice Teachers, by School-Level Percentage of Minority Students, 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the SIF - Section B. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The SIF - Section B was obtained from the CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (i.e., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. See Exhibit D-2 for the number of schools included in this analysis.

**Exhibit D-3**  
**Number of Schools, by School-Level Poverty, for Poverty Analyses**

Poverty Level	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Lowest poverty quartile	2,114	2,165	2,160	2,263	1,982	1,935	2,004
Second poverty quartile	2,113	2,167	2,237	2,262	1,983	1,934	2,004
Third poverty quartile	2,115	2,166	2,157	2,264	1,982	1,936	2,004
Highest poverty quartile	2,114	2,167	2,292	2,263	1,983	1,936	2,005
<b>Total</b>	<b>8,456</b>	<b>8,665</b>	<b>8,846</b>	<b>9,052</b>	<b>7,930</b>	<b>7,741</b>	<b>8,017</b>

*Note: School-level percentage of students receiving free or reduced-price lunches is used as the measure of poverty.*

**Exhibit B-4 –Distribution of Interns, by School-Level Percentage of Minority Students, 2006-07.** Three

data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the SIF - Section B. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The SIF - Section B was obtained from the CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. This analysis includes teachers who responded on the PAIF that they were a "university intern" or a "district intern." Only full-time teachers are included in this analysis.

**Exhibit B-5 – Percentage of Underprepared Special Education Teachers by School-Level Percentage of Minority Students, 2004-05 to 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the SIF - Section B. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The SIF - Section B was obtained from the CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared special education teachers are teachers who responded on the PAIF that they had a special education authorization and held a credential, permit, or certificate other than a "full credential" (e.g., preliminary, professional clear, life credential). This definition of underprepared

includes teachers holding intern credentials or certificates.

**Exhibit B-6 – Percentage of Underprepared Teachers in Schools with the Highest and Lowest Percentages of Students in Poverty, 2000-01 to 2006-07.** Three

data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Free and Reduced Price Meals data file. The List of California Public Schools and Districts and the PAIF data files were obtained from CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The Free and Reduced Price Meals data file was obtained from the CDE's CalWORKS Web site at

<http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a "full credential" (i.e., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

**Exhibit B-7 – Percentage of Underprepared and Novice Teachers by School-Level Percentage of Students in Poverty, 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Free and Reduced Price Meals data file.

The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE's CBEDS Web site at

<http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The Free and Reduced Price Meals data file was obtained from the CDE's CalWORKS Web site at

<http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on

the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. See Exhibit D-3 for the number of schools included in this analysis.

**Exhibit B-8 –Distribution of Interns by School-Level Percentage of Students in Poverty, 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Free and Reduced Price Meals data file. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The Free and Reduced Price Meals data file was obtained from the CDE’s CalWORKS Web site at <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. This analysis includes teachers who responded on the PAIF that they were a “university intern” or a “district intern.” Only full-time teachers are included in this analysis.

**Exhibit B-9 – Percentage of Underprepared Special Education Teachers, by School-Level Percentage of Students in Poverty, 2004-05 to 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Free and Reduced Price Meals data file. The List of California Public Schools and Districts and the PAIF data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The Free and Reduced Price Meals data file was obtained from the CDE’s CalWORKS Web site at <http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared special education teachers are teachers who responded on the PAIF that they had a special education authorization and held a credential, permit, or certificate other than a “full credential” (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates.

**Exhibit B-10 – Percentage of Underprepared Mathematics and Science Teachers, 2001-02 to 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the Course Data by Assignment (Assign06). These data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a “full” credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

**Exhibit B-11 – Percentage of Underprepared First- and Second-Year Mathematics and Science Teachers, 2001-02 to 2006-07.** Three data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) Course Data by Assignment (Assign06). These data files were obtained from the CDE’s CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Novice teachers are those who reported 0, 1, or 2 years of teaching experience on the PAIF. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a “full” credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

**Exhibit B-12 – Percentage of Underprepared Mathematics and Science Teachers, by School-Level Percentage of Minority Students, 2000-01 to 2006-07.** Four data files were merged to conduct this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, (3) Course Data by Assignment (Assign06), and (4) the SIF - Section B. The first three data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The fourth data file, SIF – Section B, was obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/sd/cb/studentdatafiles.asp>. All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a “full” credential (i.e., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

**Exhibit B-13 – Percentage of Underprepared Mathematics and Science Teachers, by API Achievement Quartile, 2001-02 to 2006-07.** For each year presented in this exhibit, four data files were merged to conduct the analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, (3) Course Data by Assignment (Assign06), and (4) the API Growth data file. The List of California Public Schools and Districts, the PAIF, and Assign06 data files were obtained from the CDE's CBEDS Web site at <http://www.cde.ca.gov/ds/ss/cb/staffdatafiles.asp>. The API Growth data file was obtained from the CDE's Testing and Accountability Web site at <http://www.cde.ca.gov/ta/ac/ap/apidatafiles.asp>.

All nontraditional schools, such as adult, vocational, or state special schools, or other alternative schools, are excluded from this analysis. Only full-time teachers are included in this analysis. Underprepared teachers are teachers who responded on the PAIF that they held a credential other than a “full” credential (e.g., preliminary, professional clear, life credential). This definition of underprepared includes teachers holding intern credentials or certificates. Teachers were identified as being “assigned” to mathematics if they reported on the PAIF that they taught at least one mathematics course. Teachers were identified as being “assigned” to science if they reported on the PAIF that they taught at least one science course.

**Exhibit B-14 – Actual and Projected K-12 Public School Enrollment, 1990-91 to 2014-15.** Data from the California Department of Finance (CDOF) 2006 Series: *California K-12 Public Enrollment and High School Graduates* are presented in this exhibit. The 2006 Series was obtained from the CDOF Web site at <http://www.dof.ca.gov/HTML/DEMOGRAP/Reports/Papers/Projections/Enrollment/K12-05/k12enrlmntprjctns2006.php>.

**Exhibit B-15 – Number of California State Teachers' Retirement System (CalSTRS) Membership Retirements, 1995-96 to 2005-06.** Data from the CalSTRS 2006 Comprehensive Annual Financial Report are presented in this exhibit. The 2006 report was obtained from the CalSTRS Web site at [http://www.calstrs.com/Help/forms\\_publications/printed/CurrentCAFR/CAFRall.pdf](http://www.calstrs.com/Help/forms_publications/printed/CurrentCAFR/CAFRall.pdf).

**Exhibit B-16 – Number of New University and District Intern Credentials Issued, 1995-96 to 2005-06.** Data from the CCTC are presented in this exhibit. Data for 1995-96 through 1998-99 were obtained from the CCTC by special request. Data for 1999-2000 through 2005-06 were obtained from the CCTC's annual *Teacher Supply in California* reports at <http://www.ctc.ca.gov/reports/leg-reports-archive.html>.

**Exhibit B-17 – Number of California Credentials Issued to Teachers Trained Out-of-State, 1999-00 to 2005-06.** Data from the CCTC are presented in this exhibit. These data were obtained from the CCTC's annual *Teacher Supply in California* reports at <http://www.ctc.ca.gov/reports/leg-reportsarchive.html>.

**Exhibit B-18 – Probability of Having Had an Underprepared Teacher by API Achievement**

**Quartile.** Data from the following files were used in this analysis: (1) the List of California Public Schools and Districts, (2) the PAIF, and (3) the API Growth data file. The average percentage of underprepared faculty by API Achievement calculated for Exhibit 8 is used for this analysis.

The model assumes that students attend schools where the percentage of underprepared faculty is equal to the average percentage of underprepared faculty for each API category.

This model also assumes that the probability of an underprepared teacher in any grade is equal to the average percentage of underprepared faculty for schools in that particular API category. For example, if 23% of the teachers in schools in the lowest API category are underprepared in a given school year, there is a 23% probability that any teacher in any grade level in those schools in that school year is underprepared. The calculated probability of being taught by one underprepared teacher or more than one underprepared teacher applies only to students in 2006-07 who attended the same school from kindergarten to sixth grade.